STATE OF CALIFORNIA — CA[illegible]NIA ENVIRONMENTAL PROTECTION AGENCY PETE WILSON [illegible]

DEPARTMENT [illegible] TOXIC SUBSTANCES CONTROL

1011 N. GRANDVIEW AVENUE
GLENDALE, CA 91201
(818) 551-2800
(818) 551-2892

COPY

M E M O R A N D U M

TO: File

FROM: Alan Sorsher
Senior Waste Management Engineer
Region 3, Glendale

DATE: October 29, 1993

SUBJECT: CLOSURE OVERSIGHT REPORT #15 FOR WHITTAKER CORP., BERMITE DIVISION, EPA ID #CAD 064573108

Enclosed is the Closure Oversight report for Whittaker Corporation, Bermite Division, located in Santa Clarita, California. The report covers the status of closure-related activities for the facility beginning July 1, 1993 and ending September 30, 1993.

enclosure

cc: Mr. Greg Lovato
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, California 94105

Mr. Steve Koyasako
Office of Legal Counsel and Criminal Investigations
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

Mr. Donald Williams
Senior Planner
City of Santa Clarita
23920 Valencia Blvd. Suite 300
Santa Clarita, CA 91355

STATUS REPORT #15

CLOSURE OVERSIGHT
for

WHITTAKER CORPORATION, BERMITE DIVISION
22116 West Soledad Canyon Road, Santa Clarita, California
EPA ID NUMBER CAD 064573108

July 1, 1993 through September 30, 1993

Prepared by:

California Environmental Protection Agency
Department of Toxic Substances Control
Region 3 - Glendale

October 1993

CLOSURE OVERSIGHT STATUS REPORT #15

WHITTAKER CORPORATION, BERMITE DIVISION, SANTA CLARITA, CALIFORNIA
EPA ID NUMBER CAD 064 573 108

October 29, 1993

A. Introduction

This status report for the closure of the Whittaker-Bermite facility identifies the closure activities conducted, submittals by the facility and decisions made between July 1, 1993 and September 30, 1993. Facility background information was furnished in the initial closure Oversight Report dated July 1989.

In late 1989 and early 1990, U.S.EPA and DTSC (at that time DHS) acknowledged certifications of clean closure for 6 portable storage units, 2 stationary storage units, and the lead azide wash-water treatment unit. In February 1992, DTSC acknowledged clean closure of two open burning/open detonation (OB/OD) units. On July 22, 1992 DTSC acknowledged clean closure of the remaining OB/OD unit. On May 26, 1993, DTSC acknowledged clean closure of the 342 surface impoundment area. Of the original 14 RCRA-regulated units, only the area of the former surface impoundment near building 317 remains in the closure process.

B. General Developments

Groundwater monitoring and soil vapor extraction continues at the 317 surface impoundment area.

As reported in Closure Oversight Report #7, the Anden Group, in partnership with Whittaker is planning for residential and commercial development of the property. As lead agency under the California Environmental Quality Act, the City of Santa Clarita has begun preparation of a Draft Environmental Impact Report (DEIR) for a plan which would include development of this property. The DEIR was received on September 30, 1993.

On July 21, 1993 DTSC sent a formal request to Whittaker regarding information on potential releases from solid waste management units. This request was similar to requests made by U.S. EPA in 1987 and 1988. A response was received from Whittaker on October 26, 1993.

C. Submittals Received from the Facility

1. Monthly status report for closure activities performed during June, 1993, dated July 12, 1993.

2. Monthly Status Report for closure activities performed during July 1993, dated August 13, 1993.

3. Report of Abandonment of Ground Water Monitoring Wells MW-2, MW-

7, MW-8, and MW-9 at the former 342 Surface Impoundment Area, dated August 30, 1993.

4. Area 317 RCRA Ground Water Quality Monitoring Report, April 1993 - June 1993, dated September 14, 1993.

5. Monthly Status Report for closure activities performed during August 1993, dated September 28, 1993.

D. Groundwater and Soil Cleanup/Monitoring at Surface Impoundment Areas

1. 342 Impoundment Area:

As discussed in the above, unit is now considered clean closed and the monitoring wells have been abandoned under a plan approved by a DTSC geologist.

2. 317 Surface Impoundment Area:

Monitoring well #10, the replacement for well #4, continues to test clean for TCE contamination. Whittaker has begun implementation of a modified groundwater monitoring program to comply with the California Interim Status groundwater monitoring regulations.

Whittaker continues to test soil vapor probes and operate vapor extraction wells to characterize and remediate soil contamination at this unit.

In late 1992, AMV submitted an assessment of the soil vapor monitoring system and a workplan for additional probes and extraction wells. DTSC plans to respond to this in the near future.

ACTON • MICKELSON • van DAM, INC.
Consulting Scientists, Engineers, and Geologists

5090 Robert J. Mathews Parkway, #4
El Dorado Hills, California 95762

(916) 939-7550
Fax (916) 939-7570

September 27, 1993

Mr. Allan Plaza
California Environmental Protection Agency
Department of Toxic Substances Control
1011 North Grandview Avenue
Glendale, California 91201

21001.09

Subject: Request of Extension of Closure Period--Site 317 Surface Impoundment
Whittaker Corporation, Bermite Division

Dear Mr. Plaza:

Acton • Mickelson • van Dam, Inc. on behalf of its client, Whittaker Corporation, Bermite Division, is hereby requesting extension of the completion deadline for Item 8 of Schedule of Closure Activities 317 Surface Impoundment, VOC Removal. Whittaker Corporation requests that the completion deadline be extended from September 1, 1993 to September 1, 1994.

Previous requests by Whittaker Corporation, Bermite Division, for extensions for closure were granted for the 317 Surface Impoundment by the California Environmental Protection Agency, Department of Toxic Substances Control in the enclosed letter dated August 31, 1992, from Mr. Allan Plaza, Unit Chief, Facility Management Branch, to Mr. Edward Muller, Vice President, Whittaker Corporation, establishing a new deadline for closure completion of September 1, 1993.

Please call me at (916) 939-7550 if you have any questions.

Sincerely,

ACTON • MICKELSON • van DAM, INC.

Barbara J. Mickelson, P.E.
President

BJM:ecd
Enclosure

cc/enc: Mr. Gordon J. Louttit, Esq., Whittaker Corporation
Mr. Glen AbdunNur, Whittaker Corporation, Bermite Division
Mr. Anastacio Medina, Los Angeles County, Department of Health Services
Mr. Andrew Hollbrook, Los Angeles Regional Water Quality Control Board
Mr. Don Williams, City of Santa Clarita
Mr. Greg Lovato, U.S. Environmental Protection Agency, Region IX

WHI01.09

STATE OF CALIFORNIA — CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
PETE WILSON, *Governor*

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
1405 N. SAN FERNANDO BLVD., SUITE 300
BURBANK, CA 91504
(818) 567-3000

August 31, 1992

Ms. Barbara J. Mickelson, P.E.
Acton, Mickelson, van Dam, Inc.,
5090 Robert J. Mathews Parkway, #4
El Dorado Hills, CA 95762

Dear Ms. Mickelson:

REQUEST FOR EXTENSION OF CLOSURE PERIOD FOR 317 SURFACE IMPOUNDMENT, WHITTAKER CORP., BERMITE DIVISION, SANTA CLARITA, CA EPA ID No. CAD 064573108

The Department of Toxic Substances Control (DTSC) has received your letter of August 31, 1992 requesting an extension of time for closure of the 317 and 342 surface impoundment areas as discussed in the approved closure plan.

Since we anticipate that field work and groundwater monitoring at both the 317 and 342 areas will continue for more than 180 days, we are hereby extending the closure completion targets to September 1, 1993.

If you have questions, please contact Mr. Alan Sorsher at (818) 567-3119.

Sincerely,

Allan Plaza

Allan Plaza, Unit Chief
Facility Management Branch

cc: Mr. Glen AbdunNur
Bermite Division
22116 W. Soledad Canyon Road
Santa Clarita, CA 91350

Mr. Anastacio Medina
Los Angeles County Hazardous Waste Program
2615 S. Grand Ave., 6th Floor
Los Angeles, CA 90007

Mr. Donald M. Williams, Senior Planner
City of Santa Clarita
23920 Valencia Blvd. Suite 300
Santa Clarita, CA 91355

Mr. Tom Kelly
U.S. EPA, Region IX
1235 Mission Street
San Francisco, CA 94103

Mr. Steve Koyasako
Toxics Legal Office
Depart of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95812-0806

State of California — Department of Toxic Substances Control

Memorandum

To : File

Date: June 24, 1993

From : Alan Sorsher
(818) 551-2892

Subject: CLOSURE OVERSIGHT REPORT #14 FOR WHITTAKER CORP., BERMITE DIVISION, EPA ID #CAD 064573108

Enclosed is the Closure Oversight report for Whittaker Corporation, Bermite Division, located in Santa Clarita, California. The report covers the status of closure-related activities for the facility beginning April 1, 1993 and ending June 30, 1993.

enclosure

cc: Ms. Lily Herkovitz
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, California 94105

Ms. Nancy Long
Cal/EPA
555 Capitol Mall
Suite 235
Sacramento, California 95814

Mr. Steve Koyasako
Office of Legal Counsel and Criminal Investigations
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

Mr. Donald Williams
Senior Planner
City of Santa Clarita
23920 Valencia Blvd. Suite 300
Santa Clarita, CA 91355

STATUS REPORT #14

CLOSURE OVERSIGHT
for

WHITTAKER CORPORATION, BERMITE DIVISION
22116 West Soledad Canyon Road, Santa Clarita, California
EPA ID NUMBER CAD 064573108

April 1, 1993 through June 30, 1993

Prepared by:

California Environmental Protection Agency
Department of Toxic Substances Control
Region 3 - Glendale

June 1993

CLOSURE OVERSIGHT STATUS REPORT #14

WHITTAKER CORPORATION, BERMITE DIVISION, SANTA CLARITA, CALIFORNIA
EPA ID NUMBER CAD 064 573 108

June 24, 1993

A. Introduction

This status report for the closure of the Whittaker-Bermite facility identifies the closure activities conducted, submittals by the facility and decisions made between April 1, 1993 and June 30, 1993. Facility background information was furnished in the initial closure Oversight Report dated July 1989.

In late 1989 and early 1990, U.S.EPA and DTSC (at that time DHS) acknowledged certifications of clean closure for 6 portable storage units, 2 stationary storage units, and the lead azide wash-water treatment unit. In February 1992, DTSC acknowledged clean closure of two open burning/open detonation (OB/OD) units. On July 22, 1992 DTSC acknowledged clean closure of the remaining OB/OD unit. On May 26, 1993, DTSC acknowledged clean closure of the 342 surface impoundment area. Of the original 14 RCRA-regulated units, only the area of the former surface impoundment near building 317 remains in the closure process.

B. General Developments

Groundwater monitoring and soil vapor extraction continues at the 317 surface impoundment area. Groundwater monitoring has been discontinued at the 342 impoundment area.

As reported in Closure Oversight Report #7, the Anden Group, in partnership with Whittaker is planning for residential and commercial development of the property. As lead agency under the California Environmental Quality Act, the City of Santa Clarita has begun preparation of a Draft Environmental Impact Report (DEIR) for a plan which would include development of this property. The DEIR was expected to be issued for our review in March 1993, but has been postponed at least until July 1993.

C. Submittals Received from the Facility

1. Area 342 RCRA Ground Water Quality Monitoring Report, January - March 1993, dated April 9, 1993.

2. Area 317 RCRA Ground Water Quality Monitoring Report, January - March 1993, dated April 9, 1993.

3. Monthly status report for closure activities performed during March, 1993, dated April 12, 1993.

4. Certification of clean closure for former 342 surface

impoundment area, dated April 23, 1993.

5. Monthly Status Report for closure activities performed during April 1993, dated May 11, 1993.

6. Monthly Status Report for closure activities performed during May 1993, dated June 15, 1993.

7. Proposal for Abandonment of Groundwater Monitoring Wells at the 342 Surface Impoundment Area.

D. Groundwater and Soil Cleanup/Monitoring at Surface Impoundment Areas

1. 342 Impoundment Area:

As discussed in the above, unit is now considered clean closed.

2. 317 Surface Impoundment Area:

Monitoring well #10, the replacement for well #4, continues to test clean for TCE contamination. Whittaker's modified groundwater monitoring program to comply with the California Interim Status groundwater monitoring regulations has been sent to DTSC headquarters for review.

Whittaker continues to test soil vapor probes and operate vapor extraction wells to characterize and remediate soil contamination at this unit.

In late 1992, AMV submitted an assessment of the soil vapor monitoring system and a workplan for additional probes and extraction wells. DTSC plans to respond to this in the near future.

STATE OF CALIFORNIA — CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY PETE WILSON, *Governor*

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
1011 N. GRANDVIEW AVENUE
GLENDALE, CA 91201
(818) 551-2800

May 26, 1993

Mr. Edward R. Muller
Vice President and
Chief Administrative Officer
Whittaker Corporation
10880 Wilshire Boulevard
Los Angeles, California 90024

Dear Mr. Muller:

ACKNOWLEDGEMENT OF PARTIAL CLOSURE, 342 SURFACE IMPOUNDMENT AREA AT WHITTAKER CORPORATION, BERMITE DIVISION, SANTA CLARITA, CA. EPA ID. #CAD064573108

The Department of Toxic Substances Control (DTSC) has received the letter dated April 23, 1993 certifying that the former 342 Surface Impoundment Area portion of your facility has been closed in accordance with the approved closure plan.

DTSC now agrees with the conclusions of the December 1992 hydrogeologic assessment that inorganic contamination of groundwater near the impoundment area is a result of activities other than the regulated unit (342 impoundment). Whittaker may cease groundwater monitoring at the 342 area.

This letter is to inform you that the DTSC now considers the above-referenced hazardous waste management unit officially closed.

This acknowledgment is for the above-referenced unit only and is based on the assumption that the information submitted in the certification as well as any information used as a basis for this decision is accurate. Any inaccuracies found in this information may be grounds for nullification of this closure certification and potential enforcement action. The Owner/Operator must inform the Department of any deviations from or changes in the information provided which would affect the closure certification for the above-referenced unit.

Please be advised that this acknowledgment of partial

facility closure is not a certification that your facility does not pose any environmental or public health threat. This letter does not remove any liabilities associated with past hazardous waste management practices which occurred on the site. In particular, this letter does not preclude DTSC from requiring corrective action for releases of hazardous waste or hazardous constituents from hazardous or solid waste management units anywhere at the facility.

Should you have questions, please contact Alan Sorsher of this office at (818) 551-2892.

Sincerely,

Jose Kou, P.E., Chief
Facilities Management Branch

cc: Ms. Barbara Mickelson, P.E.
Acton, Mickelson, van Dam, Inc.
5090 Robert J. Mathews Parkway, #4
El Dorado Hills, CA 95762

Mr. Anastacio Medina, LA County Haz. Waste Program
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Mr. Jim Ross, RWQCB, Los Angeles
101 Centre Plaza Drive
Monterey Park, CA 91754-2156

Mr. Glen Abdun Nur
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Mr. Don Williams, Senior Planner
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Mr. Yasser Aref
Region 3

Mr. Steve Koyasako
Department of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95812-0806

Ms. Lily Herkovitz
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105

Map

ACTON • MICKELSON • van DAM, INC.
Consulting Scientists, Engineers, and Geologists

5090 Robert J. Mathews Parkway, #4
El Dorado Hills, California 95762

(916) 939-7550
Fax (916) 939-7570

April 23, 1993

Mr. Alan Sorsher, P.E.
California Environmental Protection Agency
Department of Toxic Substances Control
1011 North Grandview Avenue
Glendale, California 91201

WHI01.20

Subject: Certification of Clean Closure for Resource Conservation and Recovery Act Hazardous Waste Management Unit: Former Area 342 Surface Impoundment, Whittaker Corporation, Bermite Division 22116 West Soledad Canyon Road, Santa Clarita, California--EPA No. CAD064573108

Dear Mr. Sorsher:

The Whittaker Corporation, Bermite Division (Whittaker) facility (site), located at 22116 West Soledad Canyon Road, Santa Clarita, California, was utilized by Whittaker for the design, development, formulation, fabrication, and assembly of explosive, propellant, and pyrotechnic devices from 1967 until April 1987, at which time Whittaker discontinued operations at the site. Prior to acquisition in 1967 by Whittaker, the site had been utilized in a similar capacity since approximately 1906, when the site was initially developed. At the time operations were terminated in April 1987, Whittaker had interim status permits for 14 Resource Conservation and Recovery Act (RCRA) Hazardous Waste Management Units (HWMUs) at the site.

A document entitled "Whittaker Corporation, Bermite Division, Santa Clarita, California CAD064573108, Facility Closure Plan Modifications" (Closure Plan), was prepared by Whittaker and approved by the California Department of Health Services (DHS) and U.S. Environmental Protection Agency (EPA) on December 28, 1987. Outlined in the Closure Plan are procedures for obtaining approval by DHS and EPA of clean closure certification for the different HWMUs. Currently, 12 of the 14 HWMUs have received DHS approval of clean closure certification.

The closure performance standard for clean closure certification, as stated in 40 CFR 265.111, is as follows:

"The owner or operator must close his facility in a manner that:

(a) Minimizes the need for further maintenance, and

(b) Controls, minimizes, or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere.

(c) Complies with the closure requirements of Sections 265.197, 265.228, 265.258, 265.280, 265.310, 265.351, 265.381, and 265.404."

The report entitled "Additional Hydrogeologic Assessment of the 342 Surface Impoundment Area, December 1992" provides the technical data to support clean closure of the Former 342 Surface Impoundment. Prior to the completion of the December 1992 report, ground water quality monitoring had been ongoing in Area 342 involving monitoring well MW-2 since October 1988 and additionally involving monitoring wells MW-7, MW-8, and MW-9 since January 1992, with seven monitoring events including all Area 342 wells completed to date. The results of each ground water monitoring event conducted in Area 342 have been submitted to DTSC in technical reports prepared by Whittaker Corporation's consultants as summarized on Attachment 1. The data which support clean closure are summarized below:

- Soil samples collected from 2.5 and 3 feet below the Former 342 Surface Impoundment following removal of the impoundment were analyzed for lead, phosphate and sulfate. Phosphate was not detected in either sample and lead and sulfate levels were consistent with those detected in a background sample collected at the same time. The results of the sampling were submitted to Mr. Nestor G. Acedera in a letter dated November 30, 1983, from Mr. Zoyd Luce, Whittaker Corporation, Bermite Division.

- Soil samples collected from soil borings advanced in the Former 342 Surface Impoundment to depths of 21 feet below ground surface did not detect soil contamination by specified organic compounds (EPA methods 8240 and 8270), specified metals or hazardous constituents. The results of the soil sample collection and analyses were documented in a report entitled "Verification Sampling Results at Selected RCRA Units" Wenck Associates 1988.

- A soil sample collected from a boring advanced to a depth of 15 feet below the Former 342 Surface Impoundment did not detect elevated levels of chloride as documented in a report entitled "Soil Sampling Results for the Old Lead Azide Building and Drainage Area; Building 110 Sump, Drainage Area and Pond 342; Ravine Below the Phosphorous Stabilizing Area; and Building 228 Area" Delta Environmental Consultants 1991.

- The only compound in the ground water underlying the Former 342 Surface Impoundment detected at elevated levels is chloride. The elevated level of chloride in turn causes electrical conductivity and total organic halogen (TOX) levels to be elevated. The Former 342 Surface Impoundment was used to store and stabilize phosphorous compounds prior to off-site disposal. Chloride containing compounds were not used in this process.

- No other chemicals or minerals, including those listed on Attachment 2, were detected at elevated levels in the ground water samples collected from monitoring wells in the area downgradient from the Former 342 Surface Impoundment.

- Phosphorous which was known to be treated in the Former 342 Surface Impoundment has not been detected in any ground water samples collected from monitoring wells downgradient of the Former 342 Surface Impoundment since ground water monitoring began in 1988.

- A relatively impermeable confining layer exists at a depth of approximately 480 to 500 feet below the ground surface in the area of the Former 342 Surface Impoundment. Ground water is encountered only below this confining unit and is under pressure. The amount of pressure acting on this confined ground water is demonstrated by the fact that the water encountered in each boring during the installation of monitoring wells would rise as much as 100 feet above the level of the confining layer. The presence of the confining layer and the fact that the water underlying it is under pressure act to prohibit any water migrating from the surface above to enter the ground water.

- Ground water samples collected from monitoring wells located downgradient of the Former 342 Surface Impoundment were analyzed for tritium, a radioactive element released into the atmosphere in the 1950s and 1960s as a result of atmospheric nuclear weapons testing. As a result of the weapons testing, water exposed to the atmosphere during this time period became enriched with tritium. The water stored in the Former 342 Surface Impoundment would have been enriched with tritium as a result of its exposure to the atmosphere. If water from the Former 342 Surface Impoundment had impacted ground water, this occurrence would be identified by elevated tritium levels in ground water impacted by leakage from the impoundment. The results of tritium analyses showed that the ground water underlying the Former 342 Surface Impoundment could not have been impacted by water from the impoundment because the detected tritium values were so low. Additionally, the ground water sample showing the highest chloride concentration showed the lowest tritium level.

- The tritium data show conclusively that the Former 342 Surface Impoundment could not have been the source of the ground water currently underlying the Former 342 Surface Impoundment Area.

- Large volumes of brine water containing high levels of chloride (approximately 3,200 parts per million) produced during crude oil production were reinjected into wells near the Bermite facility and located upgradient of the Former 342 Surface Impoundment. The time that it would take these waters to migrate to the ground water underlying the Former 342 Surface Impoundment is consistent with the age of the ground water containing the highest levels of chlorides downgradient of the Former 342 Surface Impoundment as determined by the tritium analyses.

- Elevated levels of chloride have been reported in ground water samples collected from the regional ground water aquifer, the Saugus Formation. The elevated chloride levels have been attributed to oil field brine reinjection and to the probable presence of connate water (prehistoric sea water).

- The data presented in the December 1992 report provide a demonstration pursuant to California Code of Regulations, Title 22, Section 66265.98 "that a source other than the regulated unit caused the evidence of a release or that the indication evidence resulted from error in sampling, analyses, or evaluation, or from natural variation in ground water, surface water, or the unsaturated zone."

Based on the data provided in the December 1992 report and summarized above, I hereby certify that the Area 342 Surface Impoundment Resource Conservation and Recovery Act Hazardous Waste Management Unit has been closed in accordance with the specification in the Closure Plan. The owner's certification of clean closure is included as Attachment 3.

ACTON • MICKELSON • van DAM, INC.

PREPARED BY:

Barbara J. Mickelson

Barbara J. Mickelson, P.E.
California Registered Professional
Engineer #43417

Date April 23, 1993

BJM:mjd
Enclosures

cc/enc: Mr. Edward Muller, Whittaker Corporation
Mr. Glen AbdunNur, Bermite Division
Ms. Lili Hershkovitz, EPA Region IX
Mr. Jim Ross, Water Quality Control Board, Los Angeles Region
Mr. Brad Brian, Esq., Munger, Tolles & Olson

ATTACHMENT 1

The following documents have been submitted to California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) and U.S. EPA, Region IX, in fulfillment of the Closure Plan regarding ground water monitoring at Area 342:

- Whittaker Corporation, Bermite Division, Santa Clarita, CA CAD064573108, Facility Closure Plan Modifications, April 1987.
- Revised Ground Water Monitoring Plan for the 317/342 Area, October 8, 1987.
- Proposed Interim Status Ground Water Monitoring Sampling and Analysis Program, December 1987.
- Documentation Report--Construction and Development of Wells for Ground Water Monitoring of the 342 and 317 Areas, February 1988.
- Verification Sampling Results at Selected RCRA Units, March 1988.
- RCRA Ground Water Monitoring System--Proposed Final Configuration, May 1988.
- Ground Water Sampling and Analysis Plan, August 1988.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 1, December 1988.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 2, March 1989.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 3, July 1989.
- Specific Plan for a Ground Water Quality Assessment Program, June 1989.
- Interim Response Action Plan, 317 Area Soil and Ground Water Remediation, June 1989.
- Site Ground Water Sampling and Analysis Plan, Appendix IV of 40 CFR 264.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 4, September 1989.
- Statistical Analysis--Well MW-2 Versus MW-1 and MW-3, October 1989.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 5, March 1990.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 6, May 1990.

- RCRA Ground Water Sampling, Quarterly Sampling Report No. 7, June 1990.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 8, October 1990.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 9, January 1991.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 10, April 1991.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 11, July 1991.
- Specific Plan for a Ground Water Quality Assessment Program for the 317 Surface Impoundment Area.
- Specific Plan for a Ground Water Quality Assessment Program for the 342 Surface Impoundment Area.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 12, October 1991.
- RCRA Ground Water Sampling, Quarterly Sampling Report No. 13, January 1992.
- RCRA Ground Water Quality Monitoring Report, 342 Surface Impoundment Hazardous Waste Management Unit, January 1992.
- RCRA Ground Water Quality Monitoring Report, 342 Surface Impoundment Hazardous Waste Management Unit, February 1992.
- RCRA Ground Water Quality Monitoring Report, 342 Surface Impoundment Hazardous Waste Management Unit, March 1992.
- RCRA Ground Water Quality Monitoring Report, 342 Surface Impoundment Hazardous Waste Management Unit, April 1992.
- RCRA Ground Water Quality Monitoring Report, 342 Surface Impoundment Hazardous Waste Management Unit, July - September 1992.
- Additional Hydrogeologic Assessment of the 342 Surface Impoundment Area, December 1992.
- RCRA Ground Water Quality Monitoring Report, 342 Surface Impoundment Hazardous Waste Management Unit, October - December 1992.
- RCRA Ground Water Quality Monitoring Report, 342 Surface Impoundment Hazardous Waste Management Unit, January - March 1993.

ATTACHMENT 2

Indicator Parameters

pH by EPA Method 9040
Specific Conductance by EPA Method 9050
Total Organic Carbon by EPA Method 9060
Total Organic Halogen by EPA Method 9020

Ground Water Quality Parameters

Endrin by EPA Method 8080
Lindane
Methoxychlor
Toxaphene
2,4 - D by EPA Method 8150
2.4.5, - TP Silver
Radium by EPA Method 9315
Gross Alpha by EPA Method 9310
Gross Beta
Coliform Bacteria by EPA Method 9131
Phenols by EPA Method 8040
Nitrate by EPA Method 9200
Sulfate by EPA Method 9035
Sodium by EPA Method 7770
Iron by EPA Method 7380
Manganese by EPA Method 7460
Total Phosphate by Standard Method 424F
Arsenic by EPA Method 7060
Barium by EPA Method 7030
Cadmium by EPA Method 7130
Lead by EPA Method 7190
Mercury by EPA Method 7420
Selenium by EPA Method 7470
Silver by EPA Method 7760
Fluoride by Standard Method 413B

Hazardous Constituents

Volatile Organics by EPA Method 8240 including:

- Benzene
- Butyl Acetate
- Carbon Disulfide
- Chloroform
- Dichloromethane
- Methyl Methacrylate
- Tetrachloroethylene
- Trichloroethylene
- Methylene Chloride
- 1,1,1,-Trichloroethane
- Methyl Ethyl Ketone
- Acetone
- Toluene
- Total Xylenes
- Ethylbenzene
- Styrene
- Decane
- Undecane

Semivolatile Organics by EPA Method 8270 including:

- Dinitrobenzene
- Diphenylamine
- Hexchloroethane Isobutyl Alcohol
- Naphthalene

ATTACHMENT 3

CERTIFICATION

I hereby certify that the Area 342 Surface Impoundment Hazardous Waste Management Unit has been closed in accordance with the specifications of the Closure Plan.

Edward R. Muller
Vice President and Chief Financial Officer
Whittaker Corporation

Date: 4/23/93

State of California — Department of Toxic Substances Control

Memorandum

To : File

Date: October 23, 1992

From : Alan Sorsher
(818) 567-3119

Subject: CLOSURE OVERSIGHT REPORT #11 FOR WHITTAKER CORP., BERMITE DIVISION, EPA ID #CAD 064573108

Enclosed is the Closure Oversight report for Whittaker Corporation, Bermite Division, located in Santa Clarita, California. The report covers the status of closure-related activities for the facility beginning July 1, 1992 and ending September 30, 1992.

enclosure

cc: Mr. Tom Kelly
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, California 94105

Mr. Don Johnson
Hazardous Waste Management Unit
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

Mr. Brian Lewis
Department of Toxic Substances Control
P.O. Box 806
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Ms. Nancy Long
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Mr. Steve Koyasako
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Mr. Donald Williams
Senior Planner
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23920 Valencia Blvd. Suite 300
Santa Clarita, CA 91355

STATUS REPORT #11

CLOSURE OVERSIGHT
for

WHITTAKER CORPORATION, BERMITE DIVISION
22116 West Soledad Canyon Road, Santa Clarita, California
EPA ID NUMBER CAD 064573108

July 1, 1992 through September 30, 1992

Prepared by:

California Environmental Protection Agency
Department of Toxic Substances Control
Region 3 - Burbank

October 1992

CLOSURE OVERSIGHT STATUS REPORT #11

WHITTAKER CORPORATION, BERMITE DIVISION, SANTA CLARITA, CALIFORNIA
EPA ID NUMBER CAD 064 573 108

September 30, 1992

A. Introduction

This status report for the closure of the Whittaker-Bermite facility identifies the closure activities conducted, submittals by the facility and decisions made between July 1, 1992 and September 30, 1992. Facility background information was furnished in the initial closure Oversight Report dated July 1989.

In late 1989 and early 1990, U.S.EPA and DTSC (at that time DHS) acknowledged certifications of clean closure for 6 portable storage units, 2 stationary storage units, and the lead azide wash-water treatment unit. In February 1992, DTSC acknowledged clean closure of two open burning/open detonation (OB/OD) units. Since the last report, Whittaker has done additional soil sampling at the remaining OB/OD unit and has re-submitted a clean closure certification. On July 22, 1992 DTSC acknowledged clean closure of this remaining OB/OD unit. Of the original 14 RCRA-regulated units, only the areas of the 2 former surface impoundments remain in the closure process.

B. General Developments

Groundwater monitoring and soil vapor extraction continues at the 317 surface impoundment area. Groundwater monitoring also is continuing at the 342 impoundment area.

A settlement, including a penalty of $100,000, was signed in July addressing previous groundwater monitoring and financial responsibility violations.

As reported in Closure Oversight Report #7, the Anden Group, in partnership with Whittaker is planning for residential and commercial development of the property. The Draft Environmental Impact Report has not been issued.

Construction of the commuter rail station at the northerly edge of the property mentioned in the previous report has begun. Service is scheduled to begin in late October.

C. Submittals Received from the Facility

1. Monthly status report for closure activities performed during June, 1992, dated July 10, 1992.

2. Assessment of the Soil Vapor Monitoring and Extraction System at the Former 317 Surface Impoundment H.W. Management Unit, dated July 22, 1992.

3. NPDES Quarterly Report for April - June, 1992, dated July 27, 1992.

4. Area 317 RCRA Ground Water Sampling Report, Fifteenth Quarterly Report, April through June 1992, dated July 31, 1992

5. Monthly status report for closure activities performed during July, 1992, dated August 13, 1992.

6. Letter from Acton, Mickelson, van Dam requesting extension of closure period for surface impoundment areas, dated August 18, 1992.

7. Area 342 Ground Water Quality Monitoring Report for April, 1992 monitoring, dated August 18, 1992.

8. Work Plan for the Installation of an Additional Vapor Monitoring Probe Nest and Collection of Additional Soil Samples at the Former 317 Area, dated September 8, 1992.

9. Monthly status report for closure activities performed during August, 1992, dated September 9, 1992.

D. Groundwater and Soil Cleanup/Monitoring at Surface Impoundment Areas

1. Whittaker has continued to report the results of monthly sampling of the groundwater monitoring system at the 342 Surface Impoundment Area. Three of the four wells were installed during the December 1991 quarter.

   As discussed in the previous report, comparison between up and down-gradient wells implies contamination by inorganic salts. The facility insists that this is due to off-site oil field disposal activities, but DTSC is taking the position that the facility must prove this. Whittaker is modifying their groundwater monitoring program to comply with the California Interim Status groundwater monitoring regulations, along with a demonstration that the contamination is from a source other than the regulated unit.

2. So far, monitoring well #10 has not detected TCE contamination and Whittaker has discontinued pumping the groundwater at the site of the former 317 impoundment. Whittaker is modifying their groundwater monitoring program to comply with the

California Interim Status groundwater monitoring regulations

Whittaker continues to test soil vapor probes and operate vapor extraction wells to characterize and remediate soil contamination at this unit. As mentioned above, the report on the extent of soil contamination has been submitted.

E. OPEN BURNING/OPEN DETONATION UNITS

On March 4, 1992 the facility submitted a letter containing a scope of work, consistent with the closure plan, for additional trenching and sampling at the third OB/OD unit, the Burn (Pits) Area. DTSC approved this proposal on March 9, 1992. Field work was performed in early April 1992.

On May 19, 1992 a report of the additional sampling at the Burn Area was submitted along with an addendum certification of clean closure of the unit. This certification was accepted by DTSC on July 22, 1992.

F. MISCELLANEOUS SOLID WASTE MANAGEMENT UNITS

As reported previously, one or two additional SWMUs may have been uncovered during last Spring's rains. We are still waiting for a report on this from Whittaker's consultant.

STATE OF CALIFORNIA — CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

PETE WILSON, *Governor*

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

1405 N. SAN FERNANDO BLVD., SUITE 300
BURBANK, CA 91504
(818) 567-3000

August 31, 1992

Ms. Barbara J. Mickelson, P.E.
Acton, Mickelson, van Dam, Inc.,
5090 Robert J. Mathews Parkway, #4
El Dorado Hills, CA 95762

Dear Ms. Mickelson:

REQUEST FOR EXTENSION OF CLOSURE PERIOD FOR 317 SURFACE IMPOUNDMENT, WHITTAKER CORP., BERMITE DIVISION, SANTA CLARITA, CA
EPA ID No. CAD 064573108

The Department of Toxic Substances Control (DTSC) has received your letter of August 31, 1992 requesting an extension of time for closure of the 317 and 342 surface impoundment areas as discussed in the approved closure plan.

Since we anticipate that field work and groundwater monitoring at both the 317 and 342 areas will continue for more than 180 days, we are hereby extending the closure completion targets to September 1, 1993.

If you have questions, please contact Mr. Alan Sorsher at (818) 567-3119.

Sincerely,

Allan Plaza

Allan Plaza, Unit Chief
Facility Management Branch

cc: Mr. Glen AbdunNur
Bermite Division
22116 W. Soledad Canyon Road
Santa Clarita, CA 91350

Mr. Anastacio Medina
Los Angeles County Hazardous Waste Program
2615 S. Grand Ave., 6th Floor
Los Angeles, CA 90007

Mr. Donald M. Williams, Senior Planner
City of Santa Clarita
23920 Valencia Blvd. Suite 300
Santa Clarita, CA 91355

Mr. Tom Kelly
U.S. EPA, Region IX
1235 Mission Street
San Francisco, CA 94103

Mr. Steve Koyasako
Toxics Legal Office
Depart of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95812-0806

ACTON • MICKELSON • van DAM, INC.
Consulting Scientists, Engineers, and Geologists

5090 Robert J. Mathews Parkway, #4
El Dorado Hills, California 95762

(916) 939-7550
Fax (916) 939-7570

August 18, 1992

Mr. Allan Plaza
California Environmental Protection Agency
Department of Toxic Substances Control, Region 3
1405 North San Fernando Boulevard, Suite 300
Burbank, California 91504

WHI01.02

Subject: Request for Extension of Closure Period--Site 317 Impoundment
Whittaker Corporation, Bermite Division

Dear Mr. Plaza:

Acton • Mickelson • van Dam, Inc., on behalf of its client, Whittaker Corporation, Bermite Division, is hereby requesting extension of the completion deadlines for Item 8 of Schedule of Closure Activities 317 Surface Impoundment, VOC Removal and for Items 6 and 10 of Schedule of Closure Activities 317/342 Surface Impoundments, Ground Water Monitoring Plans. Whittaker Corporation requests that the completion deadlines be extended from September 1, 1992 to September 1, 1993.

Previous requests by Whittaker Corporation, Bermite Division, for extensions for closure were granted for both the 317 and 342 Impoundments by the California Department of Health Services in the enclosed letter dated November 26, 1991, from Mr. Allan Plaza, Unit Chief, Facility Management Branch, to Mr. Edward Muller, Vice President, Whittaker Corporation, establishing a new deadline for closure completion of September 1, 1992.

Please call me at (916) 939-7550 if you have any questions.

ACTON • MICKELSON • van DAM, INC.

Barbara J. Mickelson

Barbara J. Mickelson, P.E.

BJM:mjd
Enclosure

cc/enc: Mr. Edward Muller, Whittaker Corporation
Mr. Glen AbdunNur, Whittaker Corporation, Bermite Division
Mr. Anastacio Medina, Los Angeles County, Department of Health Services
Mr. Andrew Hollbrook, Los Angeles Regional Water Quality Control Board
Mr. Don Williams, City of Santa Clarita
Mr. Tom Kelly, U.S. Environmental Protection Agency, Region IX

WHI 1.09/1

STATE OF CALIFORNIA — ENVIRONMENTAL PROTECTION AGENCY PETE WILSON, *Governor*

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
1405 N. SAN FERNANDO BLVD., SUITE 300
BURBANK, CA 91504

November 26, 1991

Ms. Barbara J. Mickelson, P.E.
Acton, Mickelson, van Dam, Inc.,
3939 Cambridge Road
Cameron Park, CA 95682

Dear Ms. Mickelson:

REQUEST FOR EXTENSION OF CLOSURE PERIOD FOR 317 SURFACE IMPOUNDMENT, WHITTAKER CORP., BERMITE DIVISION, SANTA CLARITA, CA
EPA ID No. CAD 064573108

The Department of Toxic Substances Control (DTSC) has received your letter of August 30, 1991 requesting a 180-day extension of the closure period for the 317 surface impoundment area as discussed in the approved closure plan.

Since we anticipate that field work and groundwater monitoring at both the 317 and 342 areas will continue for more than 180 days, we are hereby extending the closure completion targets to September 1, 1992. This applies to all RCRA units in the approved closure plan for which closure certifications have not yet been formally approved.

If you have questions, please contact Mr. Alan Sorsher at (818) 567-3119.

Sincerely,

Allan Plaza

Allan Plaza, Unit Chief
Facility Management Branch

cc: Mr. Glen AbdunNur
Bermite Division
22116 W. Soledad Canyon Road
Santa Clarita, CA 91350

Mr. Anastacio Medina
Los Angeles County Hazardous Waste Program
2615 S. Grand Ave., 6th Floor
Los Angeles, CA 90007

STATE OF CALIFORNIA — CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY PETE WILSON, *Governor*

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

1405 N. SAN FERNANDO BLVD., SUITE 300
BURBANK, CA 91504
(818) 567-3000

July 22, 1992

Mr. Glen Abdun Nur
Bermite Division, Whittaker Corp.
22116 West Soledad Canyon Road
Santa Clarita, CA 91350

Dear Mr. Abdun Nur:

PARTIAL CLOSURE CERTIFICATION ACKNOWLEDGEMENT - BURN PITS (2) AREA AT WHITTAKER CORPORATION, BERMITE DIVISION, SANTA CLARITA, CA. EPA ID. #CAD064573108

The Department of Toxic Substances Control (DTSC) has received the engineer's revised certification dated October 10, 1991, amended May 19, 1992 and the owner's revised certification dated July 17, 1992, that a portion of your facility has been closed in accordance with the approved closure plan. This letter is to inform you that the DTSC now considers the above-referenced hazardous waste management unit officially closed.

This acknowledgment is for the above-referenced unit only and is based on the assumption that the information submitted in the certification as well as any information used as a basis for this decision is accurate. Any inaccuracies found in this information may be grounds for nullification of this closure certification and potential enforcement action. The Owner/Operator must inform the Department of any deviations from or changes in the information provided which would affect the closure certification for the above-referenced unit.

Please be advised that this acknowledgment of partial facility closure is not a certification that your facility does not pose any environmental or public health threat. This letter does not remove any liabilities associated with past hazardous waste management practices which occurred on the site.

Should you have questions, please contact Alan Sorsher of this office at (818) 567-3119.

Sincerely,

Allan Plaza
for Jose Kou, P.E., Chief
Facilities Management Branch

cc: Ms. Barbara Mickelson
Acton, Mickelson, van Dam
3939 Cambridge Road
Cameron Park, CA 95682

Mr. Anastacio Medina, LA County Haz. Waste Program
2615 S. Grand Ave., 6th Floor
Los Angeles, CA 90007

Mr. Jim Ross, RWQCB, Los Angeles
101 Centre Plaza Drive
Monterey Park, CA 91754-2156

Mr. Ed Muller
Vice President and
Chief Administrative Officer
Whittaker Corporation
10880 Wilshire Boulevard
Los Angeles, California 90024

Mr. Don Williams, Senior Planner
City of Santa Clarita
23920 Valencia Blvd. Suite 300
Santa Clarita, CA 91355

Mr. Yasser Aref
Region 3

Mr. Steve Koyasako
Department of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95812-0806

Mr. Tom Kelly
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105

STATE OF CALIFORNIA — CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY PETE WILSON, *Governor*

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
1405 N. SAN FERNANDO BLVD., SUITE 300
BURBANK, CA 91504
(818) 567-3000

June 30, 1992

Mr. Michael Feeley
U.S. EPA, Region IX
Hazardous Waste Management Division
Permits and Solid Waste Branch
75 Hawthorne Street
San Francisco, California 94105

Dear Mr. Feeley:

CLOSURE OVERSIGHT REPORT #10 FOR WHITTAKER CORP., BERMITE DIVISION, EPA ID #CAD 064573108

Enclosed is the Closure Oversight report for Whittaker Corporation, Bermite Division, located in Santa Clarita, California. The report covers the status of closure-related activities for the facility beginning April 1, 1992 and ending June 30, 1992.

Should you have questions, please contact Alan Sorsher at (818) 567-3119.

Sincerely,

Tony W.C. Lau

FOR Allan Plaza
Unit Chief
Facility Management Branch

enclosure

cc: Mr. Tom Kelly
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, California 94105

Mr. Don Johnson
Hazardous Waste Management Unit
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

Mr. Brian Lewis
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

Mr. Steve Koyasako
Toxics Legal Office
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

Mr. Donald Williams
Senior Planner
City of Santa Clarita
23920 Valencia Blvd. Suite 300
Santa Clarita, CA 91355

STATUS REPORT #10

CLOSURE OVERSIGHT
for

WHITTAKER CORPORATION, BERMITE DIVISION
22116 West Soledad Canyon Road, Santa Clarita, California
EPA ID NUMBER CAD 064573108

April 1, 1992 through June 30, 1992

Prepared by:

California Environmental Protection Agency
Department of Toxic Substances Control
Region 3 - Burbank

June 1992

CLOSURE OVERSIGHT STATUS REPORT #10

WHITTAKER CORPORATION, BERMITE DIVISION, SAUGUS, CALIFORNIA
EPA ID NUMBER CAD 064 573 108

June 30, 1992

A. Introduction

This status report for the closure of the Whittaker-Bermite facility identifies the closure activities conducted, submittals by the facility and decisions made between April 1, 1992 and June 30, 1992. Facility background information was furnished in the initial closure Oversight Report dated July 1989.

In late 1989 and early 1990, U.S.EPA and DTSC (at that time DHS) acknowledged certifications of clean closure for 6 portable storage units, 2 stationary storage units, and the lead azide wash-water treatment unit. In February 1992, DTSC acknowledged clean closure of two open burning/open detonation (OB/OD) units. Since the last report, Whittaker has done additional soil sampling at the remaining OB/OD unit and has re-submitted a clean closure certification. Groundwater monitoring and clean up and soil vapor extraction continues at the 317 surface impoundment area. Groundwater monitoring also is continuing at the 342 impoundment area.

On June 9, 1992 search warrants were served at Whittaker's Los Angeles headquarters, the office of their present consultant (AMV), the office of one of their former consultants (Wenck Associates) in Minnesota, and at the home of a former Wenck employee in Minnesota. All of the documents related to this are currently sealed by court order. This development appears to have delayed a potential settlement which was negotiated with respect to previous groundwater monitoring and financial responsibility violations.

B. General Developments

As reported in Closure Oversight Report #7, the Anden Group, in partnership with Whittaker is planning for residential and commercial development of the property. A Notice of Preparation for a Draft Environmental Impact Report was received on April 8, 1992. DTSC commented on this in an April 17, 1992 letter to the city of Santa Clarita. In addition, the City of Santa Clarita is planning to lease about 5 acres of the property near the entrance gate for a commuter rail station. No RCRA-regulated units or SWMUs are known to be on the parcel, but it is being investigated by the city for any contamination from past or current commercial activities.

The effect of the June 9 search warrants is reflected in the attached newspaper stories.

C. Submittals Received from the Facility

1. Monthly status report for closure activities performed during March, 1992, dated April 6, 1992.

2. RCRA Ground Water Quality Report for 342 Surface Impoundment Unit, January 1992 Monitoring, dated April 9, 1992.

3. NPDES Quarterly Report for January-March, 1992, dated April 13, 1992.

4. Monthly status report for closure activities performed during April, 1992, dated May 11, 1992.

5. RCRA Ground Water Quality Report for 342 Surface Impoundment Unit, February 1992 Monitoring, dated May 13, 1992.

6. Proposal for Abandonment of Well MW-4, dated May 19, 1992.

7. Addendum to Clean Closure Certification for Burn Area Unit, dated May 19, 1992.

8. RCRA Ground Water Quality Report for 342 Surface Impoundment Unit, March 1992 Monitoring, dated May 27, 1992.

9. RCRA Groundwater Sampling Report 14 for 317 Surface Impoundment Unit, January - March, 1992, dated June 8, 1992.

D. Groundwater and Soil Cleanup/Monitoring at Surface Impoundment Areas

1. Whittaker has reported the results of monthly sampling of the groundwater monitoring system at the 342 Surface Impoundment Area. Three of the four wells were installed during the December 1991 quarter.

   Comparison between up and down-gradient wells implies contamination by inorganic salts. The facility insists that this is due to off-site oil field disposal activities, but DTSC is taking the position that the facility must prove this. Whittaker must comply with the California Interim Status groundwater evaluation monitoring regulations, Title 22, §66265.99, along with the option of demonstrating that the contamination is from a source other than the regulated unit.

2. Whittaker has continued to pump and treat VOC-contaminated groundwater at the site of the former 317 impoundment. Treated groundwater is discharged under an NPDES permit.

   During January 1992, Whittaker installed monitoring well #10, near downgradient well #4 (which had shown TCE contamination in 1989 and triggered corrective action pumping). On May 26, 27, and 28, Whittaker abandoned well #4. This was observed by a DTSC geologist on May 27 and 28.

Whittaker continues to test soil vapor probes and operate vapor extraction wells to characterize and remediate soil contamination at this unit and to examine the mechanism of well #4's contamination. An expected report on the extent of soil contamination has been delayed since all of the consultant's filed were seized during the June 9 investigation.

E. OPEN BURNING/OPEN DETONATION UNITS

On March 4, 1992 the facility submitted a letter containing a scope of work, consistent with the closure plan, for additional trenching and sampling at the third OB/OD unit, the Burn (Pits) Area. DTSC approved this proposal on March 9, 1992. Field work was performed in early April 1992.

On May 19, 1992 a report of the additional sampling at the Burn Area was submitted along with an addendum certification of clean closure of the unit.

F. MISCELLANEOUS SOLID WASTE MANAGEMENT UNITS

On March 30, 1992, DTSC received a letter from the facility's consultant informing us that erosion gullies on the site revealed bags of buried trash. The area was named the "Test Range Road Area." DTSC staff visited the site on April 8, 1992 and most of the trash had been removed from the gully; only one small piece of polyethylene film, a few small pieces of wood, and a few old tin cans were visible. Whittaker's consultant is exploring possible techniques to characterize the area. In addition, the location of the area may indicate that it is actually part of the East Fork Landfill, a SWMU that was identified by Whittaker to the U.S. EPA in an August 1988 report entitled, "Documentation Report, Solid Waste Management Units."

Another SWMU also appears to be found near the Burn Area. Erosion of soil slightly northwest of the Burn Area revealed what appeared to be ash residue similar to that found in the Burn Area. Originally, it was thought that this was a contiguous part of the Burn Area RCRA unit. However, further examination of the location seems to indicate that it is another SWMU. Whittaker's consultant has collected a number of samples and has been told to collect additional samples to determine the nature of the material found and the potential for this area to release hazardous constituents.

Since the last report, Whittaker has tested the material found at this SWMU for hazardous characteristics and found that the material passed the TCLP but failed the California STLC for soluble lead and copper. The facility has disposed of the contaminated soil as hazardous waste. We expect to receive a report on this SWMU after the consultant retrieves their documents.

ACTON • MICKELSON • van DAM, INC.
Consulting Scientists, Engineers, and Geologists

5090 Robert J. Mathews Parkway, #4
El Dorado Hills, California 95762

(916) 939-7550
Fax (916) 939-7570

May 19, 1992

Mr. Allan Plaza
Department of Toxic Substances Control, Region 3
California Environmental Protection Agency
1405 North San Fernando Boulevard, Suite 300
Burbank, California 91504

WHI01.23

Subject: Addendum to the Certification of Clean Closure for the RCRA Hazardous Waste Management Unit: Burn Areas (2), EPA No. CAD 064573108

Dear Mr. Plaza:

Acton • Mickelson • van Dam, Inc. (AMV), on behalf of its client, Whittaker Corporation, Bermite Division (Whittaker), is submitting the enclosed Addendum to the certification of clean closure for a Hazardous Waste Management Unit at the Whittaker Corporation, Bermite Division facility, located at 22116 West Soledad Canyon Road, Santa Clarita, California, in accordance with the approved Closure Plan dated December 28, 1987, for the facility. Please call me at (916) 939-7550 if you have any questions regarding the enclosed.

Sincerely,

ACTON • MICKELSON • van DAM, INC.

Barbara J. Mickelson, P.E.
President

BJM:mjd
Enclosure

cc/enc: Mr. Edward Muller, Whittaker Corporation
Mr. Glen AbdunNur, Whittaker Corporation, Bermite Division
Mr. Alan Sorsher, California Environmental Protection Agency, Region 3
Mr. Tom Kelly, U.S. Environmental Protection Agency, Region IX
Mr. Jim Ross, Los Angeles Regional Water Quality Control Board

STATE OF CALIFORNIA — ENVIRONMENTAL PF :TION AGENCY PETE WILSON, *Governor*

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

1405 N. SAN FERNANDO BLVD., SUITE 300
BURBANK, CA 91504

April 16, 1992

Mr. Michael Feeley
U.S. EPA, Region IX
Hazardous Waste Management Division
Permits and Solid Waste Branch
75 Hawthorn Street
San Francisco, California 94105

Dear Mr. Feeley:

CLOSURE OVERSIGHT REPORT #8 FOR WHITTAKER CORP., BERMITE DIVISION, EPA ID #CAD 064573108

Enclosed is the Closure Oversight report for Whittaker Corporation, Bermite Division, located in Santa Clarita, California. The report covers the status of closure-related activities for the facility beginning January 1, 1992 and ending March 31, 1992.

Should you have questions, please contact Alan Sorsher at (818) 567-3119.

Sincerely,

Allan Plaza
Unit Chief
Facility Management Branch

enclosure

cc: Mr. Tom Kelly
U.S. EPA, Region IX
75 Hawthorn Street
San Francisco, California 94105

Mr. Don Johnson
Hazardous Waste Management Unit
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

Mr. Brian Lewis
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

Mr. Steve Koyasako
Toxics Legal Office
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

Mr. Luis Ito
Region 3

Mr. Donald Williams
Senior Planner
City of Santa Clarita
23920 Valencia Blvd. Suite 300
Santa Clarita, CA 91355

STATUS REPORT #9

CLOSURE OVERSIGHT
for

WHITTAKER CORPORATION, BERMITE DIVISION
22116 West Soledad Canyon Road, Santa Clarita, California
EPA ID NUMBER CAD 064573108

January 1, 1992 through March 31, 1992

Prepared by:

California Environmental Protection Agency
Department of Toxic Substances Control
Region 3 - Burbank

APRIL 1992

CLOSURE OVERSIGHT STATUS REPORT #9

WHITTAKER CORPORATION, BERMITE DIVISION, SAUGUS, CALIFORNIA
EPA ID NUMBER CAD 064 573 108

APRIL 16, 1992

A. Introduction

This status report for the closure of the Whittaker-Bermite facility identifies the closure activities conducted, submittals by the facility and decisions made between January 1, 1992 and March 31, 1992. Facility background information was furnished in the initial closure Oversight Report dated July 1989.

In late 1989 and early 1990, U.S.EPA and DTSC (at that time DHS) acknowledged certifications of clean closure for 6 portable storage units, 2 stationary storage units, and the lead azide wash-water treatment unit. Since the last report, DTSC has accepted the closure certifications for two open burning/open detonation (OB/OD) units. Two surface impoundments and one OB/OD unit are still in the closure process. Negotiations are on-going with respect to previous groundwater monitoring and financial responsibility violations.

B. General Developments

As reported in Closure Oversight Report #7, the Anden Group, in partnership with Whittaker is planning for residential and commercial development of the property. A Notice of Preparation for a Draft Environmental Impact Report is expected during April, 1992. In addition, the City of Santa Clarita is planning to lease about 5 acres of the property near the entrance gate for a commuter rail station. No RCRA-regulated units or SWMUs are known to be on the parcel, but it being investigated for any contamination from past or current commercial activities.

C. Submittals Received from the Facility

1. NPDES Quarterly Report for October-December, 1991, dated 1/10/92.

2. Monthly status report for closure activities performed during December, 1991, dated January 15, 1992.

3. RCRA Groundwater Sampling Report 13 for October - December, 1991, dated 1/21/92.

4. Monthly status report for closure activities performed during January, 1992, dated February 7, 1992.

5. Letter describing scope of work for additional trenching and sampling at Burn Area RCRA unit, dated March 4, 1992.

6. Monthly status report for closure activities performed during February, 1992, dated March 11, 1992.

7. Letter notifying DTSC of scheduling of additional field work at Burn area, dated March 30, 1992.

8. Letter notifying DTSC of a possible additional SWMU, "Test Range Road Area," dated March 30, 1992

D. Groundwater and Soil Cleanup/Monitoring at Surface Impoundment Areas

1. As reported in the previous quarterly report, Whittaker has installed two additional down-gradient wells during November 1991 and an up-gradient well during December 1991, at the 342 area. Lithology, well construction and reports of monthly groundwater sampling are expected to be submitted during April 1992.

   DTSC analyzed split samples and comparison between up and down-gradient wells implies contamination by inorganic salts. The facility insists that this is due to off-site oil field disposal activities, but DTSC is taking the position that the facility must prove this.

2. Whittaker has continued to pump and treat VOC-contaminated groundwater at the site of the former 317 impoundment. Treated groundwater is discharged under an NPDES permit.

   During January 1992, Whittaker installed monitoring well #10, near downgradient well #4 (which had shown TCE contamination in 1989 and triggered corrective action pumping). During April 1992, we expect Whittaker to submit monitoring data showing a spike up in well #4 to 88 ppb and less than 5 ppb (MCL) in the new well.

   Whittaker continues to test soil vapor probes and operate vapor extraction wells to characterize and remediate soil contamination at this unit and to examine the mechanism of well #4's contamination.

E. OPEN BURNING/OPEN DETONATION UNITS

A submittal of the soil sampling results, statistical evaluations, and clean closure certification for these 3 units was received on 10/15/91. On February 25, 1992 DTSC issued a letter to Whittaker accepting the certifications and releasing

the facility from financial responsibility for the Pans, Cage and Rails Area and for the East Fork Detonation Range Area. A copy of that letter was sent to Tom Kelly at U.S. EPA Region IX.

On March 4, 1992 the facility submitted a letter containing a scope of work, consistent with the closure plan, for additional trenching and sampling at the third OB/OD unit, the Burn (Pits) Area. DTSC approved this proposal on March 9, 1992. Field work was performed in early April 1992.

F. MISCELLANEOUS SOLID WASTE MANAGEMENT UNITS

On March 30, 1992, DTSC received a letter from the facility's consultant informing us that erosion gullies on the site revealed bags of buried trash. The area was named the "Test Range Road Area." A copy of the letter is attached. DTSC visited the site on April 8, 1992 and most of the trash had been removed from the gully; only one small piece of polyethylene film, a few small pieces of wood, and a few old tin cans were visible. Whittaker's consultant is exploring possible techniques to characterize the area. In addition, the location of the area may indicate that it is actually part of the East Fork Landfill, a SWMU that was identified by Whittaker to the U.S. EPA in an August 1988 report entitled, "Documentation Report, Solid Waste Management Units."

Another SWMU also appears to be found near the Burn Area. Erosion of soil slightly northwest of the Burn Area revealed what appeared to be ash residue similar to that found in the Burn Area. Originally, it was thought that this was a contiguous part of the Burn Area RCRA unit. However, further examination of the location seems to indicate that it is another SWMU. Whittaker's consultant has collected a number of samples and has been told to collect additional samples to determine the nature of the material found and the potential for this area to release hazardous constituents.

ACTON • MICKELSON • van DAM, INC.
Consulting Scientists, Engineers, and Geologists

3939 Cambridge Road, Suite 210
Cameron Park, California 95682

(916) 676-6422
Fax (916) 676-6433

March 30, 1992

Mr. Alan Sorsher, P.E.
California Environmental Protection Agency
Department of Toxic Substances Control
1405 North San Fernando Boulevard, Suite 300
Burbank, California 91504

WHI01.24/1

Subject: Trash Area North of Test Range Road

Dear Mr. Sorsher:

Pursuant to our telephone conversation of March 25, 1992, this letter provides written notification of an area of buried trash uncovered by 5- to 6-foot erosional gullies apparently formed by recent heavy rains in Los Angeles County. The trash observed was comprised primarily of plastic bags protruding from the sides of the erosional gullies.

The area has been arbitrarily designated the Test Range Road area because it is located generally north of Test Range Road as shown on the enclosed 1977 areal photograph of the area.

Acton • Mickelson • van Dam, Inc., at the request of Whittaker Corporation, Bermite Division, is evaluating investigative techniques, including the use of geophysical methods such as ground-penetrating radar, magnetometer or terrain conductivity surveys, and organic vapor analyses of a grid network of shallow probe holes followed by random and/or judgmental sampling for use in evaluating this area.

Please call me at (916) 676-6422 if you have any questions.

Sincerely,

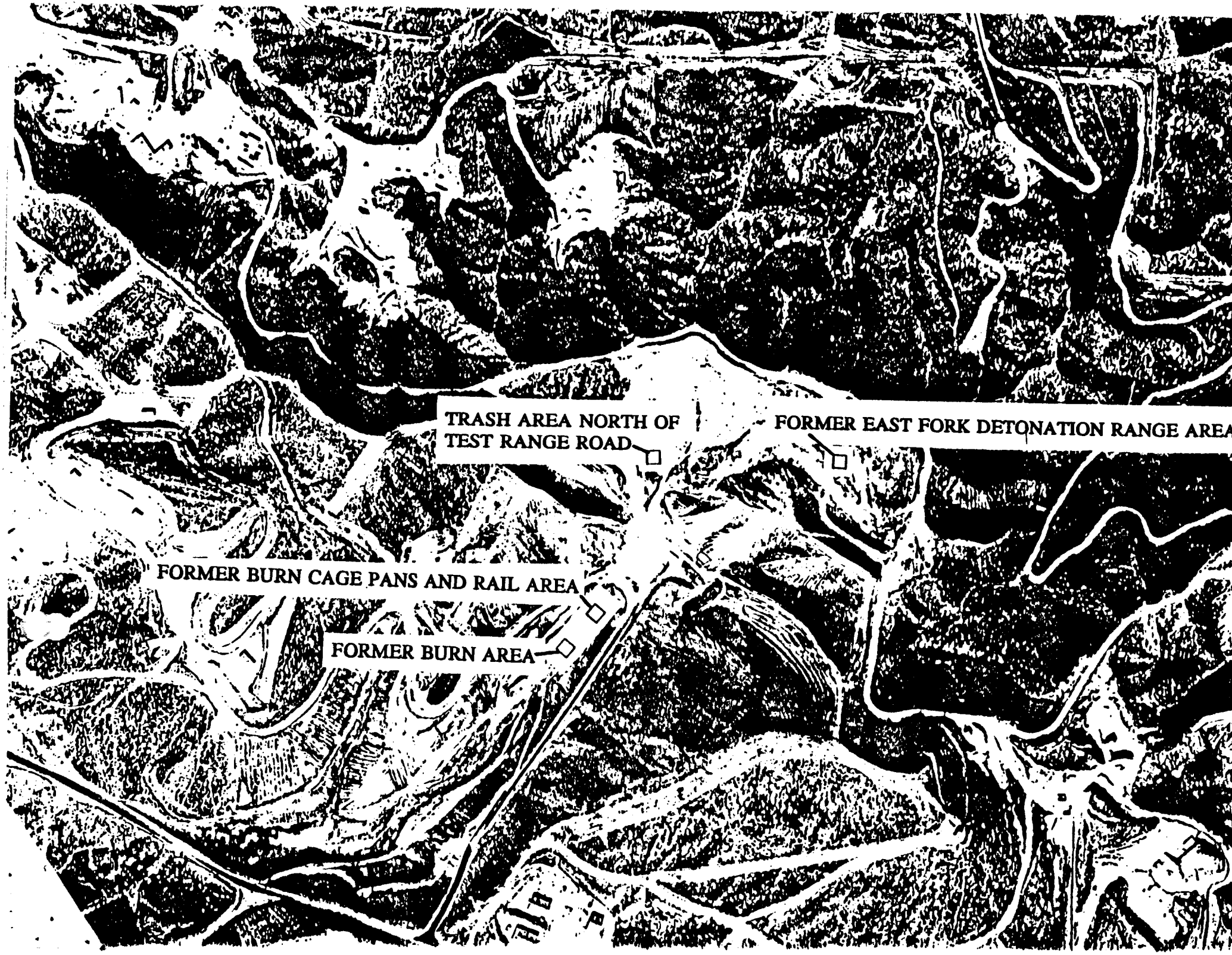
ACTON • MICKELSON • van DAM, INC.

Barbara J. Mickelson

Barbara J. Mickelson, P.E.

BJM:mjd
Enclosure

cc/enc: Mr. Ed Muller, Whittaker Corporation
Mr. Glen AbdunNur, Whittaker Corporation, Bermite Division


TRASH AREA NORTH OF
TEST RANGE ROAD
FORMER EAST FORK DETONATION RANGE AREA
FORMER BURN CAGE PANS AND RAIL AREA
FORMER BURN AREA

STATE OF CALIFORNIA — ENVIRONMENTAL PROTECTION AGENCY

PETE WILSON, *Governor*

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

1405 N. SAN FERNANDO BLVD., SUITE 300
BURBANK, CA 91504
(818) 567-3000

March 9, 1992

Ms. Barbara J. Mickelson, P.E.
Acton, Mickelson, van Dam, Inc.,
3939 Cambridge Road
Cameron Park, CA 95682

Dear Ms. Mickelson:

COLLECTION OF ADDITIONAL SOIL SAMPLES AT BURN PITS AREA,
WHITTAKER CORP., BERMITE DIVISION, SANTA CLARITA, CA
EPA ID No. CAD 064573108

The Department of Toxic Substances Control (DTSC) has received your letter of March 4, 1992 which outlines additional investigatory work to be performed at the above-referenced hazardous waste management unit. The proposed scope of work is acceptable to DTSC provided the following conditions are also met:

1. As specified in the approved closure plan, if contamination of hazardous constituents is significantly greater than the background area, or if an obvious hot spot is found, excavation and confirmation sampling will be performed.

2. Safe work practices, especially for trenching and excavation, as specified in the approved closure plan must be followed.

3. Notify Alan Sorsher and Allan Plaza of this office by fax (818-567-3129) at least one week before beginning the field work.

If you have questions, please contact Mr. Alan Sorsher at (818) 567-3119.

Sincerely,

Allan Plaza

Allan Plaza, Unit Chief
Facilities Management Branch

cc: Mr. Glen AbdunNur
Bermite Division
22116 W. Soledad Canyon Road
Santa Clarita, CA 91350

Mr. Anastacio Medina
Los Angeles County Hazardous Waste Program
2615 S. Grand Ave., 6th Floor
Los Angeles, CA 90007

Mr. Ed Muller
Vice President
and Chief Administrative Officer
Whittaker Corporation
10880 Wilshire Boulevard
Los Angeles, California 90024

Mr. Jim Ross
RWQCB, Los Angeles
101 Centre Plaza Drive
Monterey Park, CA 91754-2156

Mr. Don Williams, Senior Planner
City of Santa Clarita
23920 Valencia Blvd. Suite 300
Santa Clarita, CA 91355

Mr. Tom Kelly
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105

Mr. Steve Koyasako
Toxics Legal Office
Department of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95814-0806

STATE OF CALIFORNIA — ENVIRONMENTAL PROTECTION AGENCY

PETE WILSON, *Governor*

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

1405 N. SAN FERNANDO BLVD., SUITE 300
BURBANK, CA 91504

February 28, 1992

Mr. Glen Abdun Nur
Bermite Division, Whittaker Corp.
22116 West Soledad Canyon Road
Santa Clarita, CA 91350

Dear Mr. Abdun Nur:

PARTIAL CLOSURE CERTIFICATION ACKNOWLEDGEMENT - EAST FORK DETONATION RANGE AREA AND BURNING CAGE, PANS AND RAILS AREA AT WHITTAKER CORPORATION, BERMITE DIVISION, SANTA CLARITA, CA.
EPA ID. #CAD064573108

The Department of Toxic Substances Control (DTSC) has received the owner's and engineer's revised certification dated October 10, 1991, that a portion of your facility has been closed in accordance with the approved closure plan. This letter is to inform you that the DTSC now considers the above-referenced hazardous waste management units officially closed.

Pursuant to section 66265.143(h) of Title 22, Division 4.5, Chapter 30 of the California Code of Regulations, Whittaker is released from the requirement to maintain financial assurance for closure of the above-referenced units.

This acknowledgment and release is for the above-referenced units only and is based on the assumption that the information submitted in the certification as well as any information used as a basis for this decision is accurate. Any inaccuracies found in this information may be grounds for nullification of this closure certification and potential enforcement action. The Owner/Operator must inform the Department of any deviations from or changes in the information provided which would affect the closure certification for the above-referenced units.

Please be advised that this acknowledgment of partial facility closure is not a certification that your facility does not pose any environmental or public health threat. This letter does not remove any liabilities associated with past hazardous waste management practices which occurred on the site.

Should you have questions, please contact Alan Sorsher of this office at (818) 567-3119.

Sincerely,

Jose Kou, P.E., Chief
Facilities Management Branch

cc: Barbara Mickelson
Acton, Mickelson, van Dam
3939 Cambridge Road
Cameron Park, CA 95682

Anastacio Medina, LA County Haz. Waste Program
2615 S. Grand Ave., 6th Floor
Los Angeles, CA 90007

Jim Ross, RWQCB, Los Angeles
101 Centre Plaza Drive
Monterey Park, CA 91754-2156

Mr. Ed Muller
Vice President and
Chief Administrative Officer
Whittaker Corporation
10880 Wilshire Boulevard
Los Angeles, California 90024

Mr. Don Williams, Senior Planner
City of Santa Clarita
23920 Valencia Blvd. Suite 300
Santa Clarita, CA 91355

Mr. Paul Blais
Hazardous Waste Management Branch
Department of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95812-0806

Mr. Tom Kelly
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105

Whittaker

Whittaker Corporation
10880 Wilshire Boulevard
Los Angeles, CA 90024-4163
213/475-9411

Gordon J. Louttit
Vice President
Assistant General Counsel

February 19, 1992

Mr. Daniel McGovern (H-2-3)
Regional Administrator
United States Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, California 94105

Re: Transfer of Property Owned by Whittaker Bermite Corporation to Whittaker Corporation -- E.P.A. I.D. No. CAD064573108

Dear Mr. McGovern:

Please be advised that effective February 18, 1992, the current owner and operator of the above-referenced facility, Whittaker Bermite Corporation ("WBC"), a wholly owned subsidiary of Whittaker Corporation ("Whittaker"), transferred this facility back to its parent, Whittaker. As explained in my letter of October 24, 1991 transmitting the Revised Part A Application for that facility, this property was transferred by Whittaker to WBC in the fall of 1990 in anticipation of a transaction that did not occur. Pursuant to the request of our secured lenders, we have now transferred that property back to Whittaker Corporation. In my letter of October 24, 1991 we advised that Whittaker anticipated becoming the owner and operator of the facility on approximately February 1, 1992. The actual date of the recording of the transfer documentation was February 18, 1992.

If it has not already been done, we will appreciate it if the permit with respect to the above-referenced facility and any other relevant records be modified to reflect this change in ownership.

Please contact me if you have any comments or require additional information.

Very truly yours,

Enclosure

cc: Glen Abdun Nur
Vernon Christianson (EPA RCRA Coordinator)
Marsha S. Croninger, Esq.
James D. Richman, Esq.
Scott Simpson, California EPA

Whittaker

Whittaker Corporation
10880 Wilshire Boulevard
Los Angeles, CA 90024-4163
213/475-9411

Gordon J. Louttit
Vice President
Assistant General Counsel

February 19, 1992

Mr. Daniel McGovern (H-2-3)
Regional Administrator
United States Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, California 94105

Re: Transfer of Property Owned by Whittaker Bermite Corporation to Whittaker Corporation -- E.P.A. I.D. No. CAD064573108

Dear Mr. McGovern:

Please be advised that effective February 18, 1992, the current owner and operator of the above-referenced facility, Whittaker Bermite Corporation ("WBC"), a wholly owned subsidiary of Whittaker Corporation ("Whittaker"), transferred this facility back to its parent, Whittaker. As explained in my letter of October 24, 1991 transmitting the Revised Part A Application for that facility, this property was transferred by Whittaker to WBC in the fall of 1990 in anticipation of a transaction that did not occur. Pursuant to the request of our secured lenders, we have now transferred that property back to Whittaker Corporation. In my letter of October 24, 1991 we advised that Whittaker anticipated becoming the owner and operator of the facility on approximately February 1, 1992. The actual date of the recording of the transfer documentation was February 18, 1992.

If it has not already been done, we will appreciate it if the permit with respect to the above-referenced facility and any other relevant records be modified to reflect this change in ownership.

Please contact me if you have any comments or require additional information.

Very truly yours,

Gordon Louttit

Enclosure

cc: Glen Abdun Nur
Vernon Christianson (EPA RCRA Coordinator)
Marsha S. Croninger, Esq.
James D. Richman, Esq.
Scott Simpson, California EPA

STATE OF CALIFORNIA — ENVIRONMENTAL PROTECTION AGENCY

PETE WILSON, *Governor*

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

1405 N. SAN FERNANDO BLVD., SUITE 300
BURBANK, CA 91504

November 26, 1991

Ms. Barbara J. Mickelson, P.E.
Acton, Mickelson, van Dam, Inc.,
3939 Cambridge Road
Cameron Park, CA 95682

Dear Ms. Mickelson:

REQUEST FOR EXTENSION OF CLOSURE PERIOD FOR 317 SURFACE IMPOUNDMENT, WHITTAKER CORP., BERMITE DIVISION, SANTA CLARITA, CA EPA ID No. CAD 064573108

The Department of Toxic Substances Control (DTSC) has received your letter of August 30, 1991 requesting a 180-day extension of the closure period for the 317 surface impoundment area as discussed in the approved closure plan.

Since we anticipate that field work and groundwater monitoring at both the 317 and 342 areas will continue for more than 180 days, we are hereby extending the closure completion targets to September 1, 1992. This applies to all RCRA units in the approved closure plan for which closure certifications have not yet been formally approved.

If you have questions, please contact Mr. Alan Sorsher at (818) 567-3119.

Sincerely,

Allan Plaza

Allan Plaza, Unit Chief
Facility Management Branch

cc: Mr. Glen AbdunNur
Bermite Division
22116 W. Soledad Canyon Road
Santa Clarita, CA 91350

Mr. Anastacio Medina
Los Angeles County Hazardous Waste Program
2615 S. Grand Ave., 6th Floor
Los Angeles, CA 90007

Mr. Ed Muller
Vice President
and Chief Administrative Officer
Whittaker Corporation
10880 Wilshire Boulevard
Los Angeles, California 90024

Mr. Andrew Hollbrook,
RWQCB, Los Angeles
101 Centre Plaza Drive
Monterey Park, CA 91754-2156

Mr. David W. Hogan, Assistant Planner
City of Santa Clarita
23920 Valencia Blvd. Suite 300
Santa Clarita, CA 91355

Mr. Tom Kelly
U.S. EPA, Region IX
1235 Mission Street
San Francisco, CA 94103

Mr. Steve Koyasako
Toxics Legal Office
Department of Toxic Substances Control
400 P Street
P.O. Box 806
Sacramento, CA 95812-0806

ACTON • MICKELSON • van DAM, INC.
Consulting Scientists, Engineers, and Geologists

3939 Cambridge Road, Suite 210
Cameron Park, California 95682

(916) 676-6422
Fax (916) 676-6433

October 10, 1991

Mr. Allan Plaza
Senior Waste Management Engineer
Department of Toxic Substances Control, Region 3
California Environmental Protection Agency
1405 North San Fernando Boulevard, Suite 300
Burbank, California 91504

WHI01.06

Subject: Report for Certification of Clean Closure for Three RCRA Hazardous Waste Management Units: Burn Cage, Pans, and Rails; Burn Areas (2); and East Fork Detonation Range, EPA No. CAD 064573108

Dear Mr. Plaza:

Acton • Mickelson • van Dam, Inc., on behalf of its client, Whittaker Corporation, Bermite Division (Whittaker), is submitting the enclosed subject report providing certification of clean closure for three Hazardous Waste Management Units at the Whittaker Corporation, Bermite Division facility located at 22116 West Soledad Canyon Road, Santa Clarita, California, in accordance with the approved Closure Plan dated December 28, 1987, for the facility. Please call me at (916) 676-6422 if you have any questions regarding the enclosed.

Sincerely,

ACTON • MICKELSON • van DAM, INC.

Barbara J. Mickelson

Barbara J. Mickelson, P.E.
President

BJM:mjd
Enclosure

cc/enc: Mr. Edward Muller, Whittaker Corporation
Mr. Glen AbdunNur, Whittaker Corporation, Bermite Division
Mr. Alan Sorsher, California Environmental Protection Agency, Region 3
Mr. Tom Kelley, U.S. Environmental Protection Agency, Region IX
Mr. Jim Ross, Los Angeles Regional Water Quality Control Board

ACTON • MICKELSON • van DAM, INC.
Consulting Scientists, Engineers, and Geologists

3939 Cambridge Road
Cameron Park, CA 95682

(916) 676-6422
Fax (916) 676-6433

August 30, 1991

Mr. Allan Plaza, Unit Chief
Facility Management Branch
Toxic Substances Control Program, Region 3
California Department of Health Services
1405 North San Fernando Boulevard, Suite 300
Burbank, California 91504

WHI01.02

Subject:Request for Extension of Closure Period--Site 317 Impoundment
Whittaker Corporation, Bermite Division

Dear Mr. Plaza:

Acton • Mickelson • van Dam, Inc., on behalf of its client, Whittaker Corporation, Bermite Division, is hereby requesting an extension of the completion deadline for Item 8 "Complete Decontamination of VOC at the Site" of Schedule of Closure Activities 317 Surface Impoundment, VOC Removal. Whittaker Corporation requests that the completion deadline be extended 180 days from September 15, 1991.

Previous requests by Whittaker Corporation, Bermite Division for extensions for closure were granted by the California Department of Health Services in the enclosed letter dated March 18, 1991, from Mr. Allan Plaza, Unit Chief, Facility Management Branch to Mr. Edward Muller, Vice President, Whittaker Corporation, establishing a new deadline for completion of VOC removal of September 15, 1991.

Please call me at (916) 676-6422 if you have any questions.

Sincerely,

ACTON • MICKELSON • van DAM, INC.

Barbara J. Mickelson

Barbara J. Mickelson, P.E.

BJM:mjd
Enclosure

cc/enc: Mr. Ed Muller, Whittaker Corporation
Mr. Glen AbdunNur, Whittaker Corporation, Bermite Division
Mr. Anastacio Medina, Los Angeles County Department of Health Services
Mr. Andrew Hollbrook, Los Angeles Regional Water Quality Control Board
Mr. David Hogan, City of Santa Clarita
Mr. Tom Kelly, U.S. Environmental Protection Agency, Region IX
Mr. Brian Lewis, California Toxic Substances Control Program

STATE OF CALIFORNIA — HEALTH AND WELFARE AGENCY

PETE WILSON, *Governor*

DEPARTMENT OF HEALTH SERVICES
TOXIC SUBSTANCES CONTROL PROGRAM (REGION 3)
1405 N. SAN FERNANDO BOULEVARD, SUITE 300
BURBANK, CA 91504
(818) 567-3000

March 18, 1991

Mr. Edward R. Muller
Vice President
and Chief Administrative Officer
Whittaker Corporation
10880 Wilshire Boulevard
Los Angeles, CA 90024-4163

Dear Mr. Muller:

REQUEST FOR EXTENSION OF CLOSURE PERIOD FOR 317 SURFACE IMPOUNDMENT, BERMITE DIVISION, SANTA CLARITA, CA
EPA ID No. CAD 064573108

The Department of Health Services (DHS) has received your letters of September 14, 1990 and March 8, 1991 requesting 180-day extensions of the closure period for the 317 surface impoundment area as discussed in the approved closure plan.

The DHS grants your requests. The new deadline for completion of VOC removal will be September 15, 1991.

If you have questions, please contact Mr. Alan Sorsher at (818) 567-3119.

Sincerely,

Allan Plaza

Allan Plaza, Unit Chief
Facility Management Branch

cc: Mr. Glen AbdunNur
Bermite Division
22116 W. Soledad Canyon Road
Santa Clarita, CA 91350

Mr. Anastacio Medina
Los Angeles County Hazardous Waste Program
2615 S. Grand Ave., 6th Floor
Los Angeles, CA 90007

Mr. Andrew Hollbrook,
RWQCB, Los Angeles
101 Centre Plaza Drive
Monterey Park, CA 91754-2156

Mr. Gordon Louttit
Vice President
Whittaker Corporation
10880 Wilshire Boulevard
Los Angeles, California 90024

Mr. David W. Hogan, Assistant Planner
City of Santa Clarita
23920 Valencia Blvd. Suite 300
Santa Clarita, CA 91355

Mr. Tom Kelly
U.S. EPA, Region IX
1235 Mission Street
San Francisco, CA 94103

Mr. Steve Koyasako
Toxics Legal Office
Toxic Substances Control Program
714/744 P Street
P.O. Box 924732
Sacramento, CA 94234-7320

STATE OF CALIFORNIA — HEALTH AND WELFARE AGL / PETE WILSON, *Governor*

DEPARTMENT OF HEALTH SERVICES
TOXIC SUBSTANCES CONTROL PROGRAM (REGION 3)
1405 N. SAN FERNANDO BOULEVARD, SUITE 300
BURBANK, CA 91504
(818) 567-3000

March 18, 1991

Mr. Edward R. Muller
Vice President
and Chief Administrative Officer
Whittaker Corporation
10880 Wilshire Boulevard
Los Angeles, CA 90024-4163

Dear Mr. Muller:

REQUEST FOR EXTENSION OF CLOSURE PERIOD FOR 317 SURFACE IMPOUNDMENT, BERMITE DIVISION, SANTA CLARITA, CA
EPA ID No. CAD 064573108

The Department of Health Services (DHS) has received your letters of September 14, 1990 and March 8, 1991 requesting 180-day extensions of the closure period for the 317 surface impoundment area as discussed in the approved closure plan.

The DHS grants your requests. The new deadline for completion of VOC removal will be September 15, 1991.

If you have questions, please contact Mr. Alan Sorsher at (818) 567-3119.

Sincerely,

Allan Plaza

Allan Plaza, Unit Chief
Facility Management Branch

cc: Mr. Glen AbdunNur
Bermite Division
22116 W. Soledad Canyon Road
Santa Clarita, CA 91350

Mr. Anastacio Medina
Los Angeles County Hazardous Waste Program
2615 S. Grand Ave., 6th Floor
Los Angeles, CA 90007

Mr. Andrew Hollbrook,
RWQCB, Los Angeles
101 Centre Plaza Drive
Monterey Park, CA 91754-2156

Mr. Gordon Louttit
Vice President
Whittaker Corporation
10880 Wilshire Boulevard
Los Angeles, California 90024

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23920 Valencia Blvd. Suite 300
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714/744 P Street
P.O. Box 924732
Sacramento, CA 94234-7320

Whittaker Corporation
10880 Wilshire Boulevard
Los Angeles, CA 90024-4163
213/475-9411

Edward R. Muller
Vice President
and Chief Administrative Officer

March 8, 1991

Via Messenger

Mr. Scott Simpson, Chief
Facility Management Unit
Toxic Substances Control Program (Region 3)
California Department of Health Services
1405 North San Fernando Boulevard, Suite 300
Burbank, California 91504

Subject: Request for Extension of Closure Period
Site 317 Impoundment
Whittaker Corporation, Bermite Division

Dear Mr. Simpson:

Whittaker Corporation, Bermite Division, hereby requests an extension of the completion deadline for Item 8 "complete decontamination of VOC at the site" of Schedule of Closure Activities 317 Surface Impoundment, VOC Removal. Whittaker Corporation requests that the completion deadline be extended 180 days from March 14, 1991. An extension through March 14, 1991 for closure was requested by Whittaker Corporation in a letter dated September 14, 1990, a copy of which is enclosed.

Sincerely,

Whittaker

Whittaker Corporation
10880 Wilshire Boulevard
Los Angeles, CA 90024-4163
213/475-9411

Edward R. Muller
Vice President
and Chief Administrative Officer

September 14, 1990

Mr. Scott Simpson, Chief
Facility Management Unit
Toxic Substances Control Program (Region 3)
California Department of Health Services
1405 N. San Fernando Boulevard, Suite 300
Burbank, California 91504

Subject: Request for Extension of Closure Period
Site 317 Impoundment
Whittaker Corporation, Bermite Division

Dear Mr. Simpson:

Whittaker Corporation, Bermite Division, is hereby requesting an extension of the completion deadline for Item 8 "complete decontamination of VOC at the site" of Schedule of Closure Activities 317 Surface Impoundment, VOC Removal. Whittaker Corporation requests that the completion deadline be extended 180 days from today's date. This letter request for an extension of closure activities is submitted in partial in response to Count 3 of Mr. Simpson's letter to Mr. Glen Abdun Nur, Whittaker Corporation, wherein 40 CFR 265.113,22 is referenced.

Whittaker Corporation, based on the approved closure plan for the 317 area, proposed excavation of impoundment soils following field testing. Whittaker initiated the staged removal and sampling in December 1987, as indicated in Progress Report No. 3 submitted to Mr. Alan Sorsher, Department of Health Services (DHS), by Mr. Norman Wenck. Excavation was still on-going in August 1988 as indicated in Progress Report No. 17 submitted similarly. This progress report clearly states the extent to which decontamination has been accomplished and outlined further actions to be taken in accordance with the approved closure plan. After excavation of the 317 impoundment soils to a depth of approximately 50 feet, an alternative mitigation option, as referenced in the approved closure plan was implemented. The alternative method for decontamination of VOC on site is underway, vapor extraction is proceeding, and extracted vapors are being catalytically oxidized through the use of an innovative catalytic oxidizer developed under contract to Whittaker Corporation by King/Buck. The development of this

system was paid for by Whittaker Corporation and is, to our knowledge, the first of its kind to be used. The system was started up in August 1990 following receipt of a South Coast Air Quality Management Plan Rule 1166 permit to construct.

It is difficult to understand why at this time, more than 2 years after the initial 180 days expired, DHS/EPA is requesting that Whittaker Corporation submit a formal request for an extension of the closure deadline. Why is a formal request for extension, despite submittal of routine status reports such as those attached outlining planned activities and progress, suddenly, after 2 years of good faith effort to achieve closure, a "Count" in a Notice of Alleged Violation?

Sincerely,

Federal Express Air Bill #8301961673

cc: Mr. Al Simmons
1200 Odessa Drive
Richardson, Texas 75080

Mr. Anastacio Medina
Los Angeles County Hazardous Waste Program
2615 S. Grand Ave., 6th Floor
Los Angeles, California 90007

Mr. Andrew Hollbrook
RWQCB, Los Angeles
101 Centre Plaza Drive
Monterey Park, California 91754-2156

Mr. David W. Hogan, Assistant Planner
City of Santa Clarita
23920 Valencia Blvd., Suite 300
Santa Clarita, California 91355

Mr. Tom Kelly
U.S. EPA, Region IX
1235 Mission Street
San Francisco, California 94103

Mr. Brian Lewis
Technical Services
Toxic Substances Control Program
713 / 744 P Street
P.O. Box 924732
Sacramento, California 94234-7320

Delta
Environmental
Consultants, Inc.

3330 Data Drive, Suite 100
Rancho Cordova, CA 95670
916/638-2085
FAX: 916/638-8385

December 14, 1990

Mr. Alan Sorsher
Toxic Substances Control Division
Department of Health Services
1405 North San Fernando Boulevard, Suite 300
Burbank, California 91504

Subject: Certification of Clean Closure of RCRA Units; Burn Area, Burn Cage, Pan, and Rails Area and East Fork Area at Bermite Division of Whittaker Corporation CAD# 064573108

Dear Mr. Sorsher:

Whittaker Corporation, Bermite Division, submitted Certification of Clean Closure prepared by Wenck and Associates (Wenck) Registered Professional Engineers for the referenced RCRA Units in a report submitted in June 1988 (enclosed). Subsequently, Delta Environmental Consultants, Inc. (Delta), on behalf of Whittaker Corporation, Bermite Division, reevaluated certain soil statistics generated by Wenck for the three referenced RCRA units. These reworked statistics were submitted to the California Department of Health Services (DHS) on September 14, 1990, in response to the Report of Violation issued by DHS on July 31, 1990.

Whittaker Corporation, Bermite Division, believes that the Certifications of Clean Closure should be expeditiously forthcoming from your office for these three RCRA units.

Please advise me of the time frame in which you anticipate completing your review so that I may keep Mr. Edward Muller, Vice President, Whittaker Corporation, apprised of our progress on this matter.

Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

Barbara J. Mickelson

Barbara J. Mickelson, P.E.
California Registered Professional Engineer
Civil Engineer No. 43417

BJM:mjd

cc: Mr. Edward Muller, Whittaker Corporation
Mr. Al Simmons, Whittaker Corporation
Mr. Glen AbdunNur, Whittaker Corporation, Bermite Division
Dr. Joe Riccio, Registered Geologist
Mr. Michael O'Brien, Delta Environmental Consultants, Inc.
Mr. David W. Hogan, City of Santa Clarita
Mr. Tom Kelly, U.S. Environmental Protection Agency, Region IX
Mr. Anastacio Medina, County of Los Angeles
Mr. Andrew Hollbrook, Los Angeles Regional Water Quality Control Board

CERTIFICATION OF CLEAN CLOSURE
OF RCRA UNITS BURN AREA,
BURN CAGE, PANS AND RAILS AREA
AND EAST FORK AREA
AT BERMITE DIVISION
WHITTAKER CORPORATION
EPA NO. CAD 064 573 108
22116 WEST SOLEDAD CANYON ROAD
SAUGUS, CALIFORNIA 91350

Report Prepared by:

WENCK ASSOCIATES, INC.
832 Twelve Oaks Center
15500 Wayzata Boulevard
Wayzata, Minnesota 55391-1418
(612) 475-0858

I hereby certify that the RCRA units described in this report were inspected, cleaned, tested and clean closed in accordance with the Approved Closure Plan and Modifications and that I am a duly Registered Professional Engineer under the laws of the State of California.

Norman C. Wenck California Registration No. 41317

I hereby certify that the RCRA units described in this report were inspected, cleaned, tested and clean closed in accordance with the Approved Closure Plan and Modifications and that I am a duly authorized officer of Whittaker Corporation.

Gordon J. Louttit, Vice President Date

TABLE OF CONTENTS

Certification of Clean Closure of RCRA Units Burn Area, Burn Cage, Pans and Rails Area and East Fork Area

I. INTRODUCTION

The Bermite Division of Whittaker Corporation discontinued operations effective April 3, 1987. The Bermite facility, at the time of closure, had interim status for 14 Resource Conservation and Recovery Act (RCRA) units. Under RCRA, a formal closure plan was required to certify closure of the RCRA units. An approved RCRA Closure Plan was agreed to by Whittaker Corporation and the California Department of Health Services (DHS) and the Environmental Protection Agency (EPA). The approved RCRA Closure Plan was received by Whittaker Corporation on December 28, 1987.

As directed by the approved RCRA Closure Plan, sampling and analysis of the soils of the three RCRA units: Burn Area; Burn Cage Pans and Rails Area; and the East Fork Area were required to verify the absence of hazardous wastes or hazardous constituents. This verification sampling and analysis has been completed. The verification sampling procedures and analysis results from these three RCRA units were detailed in an earlier report, "Verification Sampling at Selected RCRA Units", dated March 1988. That report is incorporated by reference into this Certification of Clean Closure report.

This certification report summarizes the verification sampling and analysis activities detailed in the above referenced report. The results and conclusions of that report pertaining to the three RCRA units are repeated and expanded upon herein.

Pertinent tables from the "Verification Sampling at Selected RCRA Units" Report are included with this report. The results verify that no hazardous metal concentrations are present in the soils of these three RCRA units. In addition, no organic hazardous constituents were found in these soils.

II. PROCEDURES

The procedures for determining sampling locations, sampling protocol and analysis methods at the three RCRA units were specified in the approved Closure Plan. These procedures have been detailed in the "Verification Sampling at Selected RCRA Units" report.

In summary, random sampling locations were determined and soil samples for laboratory analysis were taken at one foot intervals to a depth below which activities at the RCRA units took place during the active life of the RCRA units.

All samples were taken and analyzed within prescribed EPA and approved Closure Plan protocol. The analysis results were presented in the referenced report complete with the required statistical analysis.

Samples from these three RCRA units were analyzed for the specified metal compounds and for a specified list of organic compounds. These compounds are given in the attached Table 1. In addition, one initial sample from each of the three RCRA units was analyzed for the specified organic and inorganic hazardous constituents from Appendix VIII of 40 CFR 261. These compounds are listed in Attachment 1.

III. REMEDIAL ACTION

The remedial action undertaken at the three RCRA units was the removal and disposal of the steel rails and cage structure that existed at the Burn Cage, Pans and Rails Area as well as the ash and residual contaminated soils. This removal was indicated in the original Closure Plan.

IV. VERIFICATION SAMPLING RESULTS

A. General

None of the Appendix VIII hazardous constituents were found in the soil samples from each of the RCRA units. The laboratory reports of these analyses were included in Appendix F of the "Verification Sampling at Selected RCRA Units" report.

None of the five organic compounds which were analyzed in 20% of the soil samples from the RCRA units were detected. Therefore, no tables of these results are presented. The laboratory reports of these analyses were included in Appendix E of the above referenced report.

The results of the verification sampling analyses for metal concentrations were presented as Tables 6, 7, 8, 10, 11 and 12 in the "Verification Sampling at Selected RCRA Units" report and are presented herein as Attachment 2.

A summary of the analysis results from the tables in Attachment 2 is presented as Table 2. Table 2 also lists the hazardous waste criteria for metal concentrations in soils, the Total Threshold Limit Concentrations (TTLC). These levels, as promulgated by the California Health and Safety Code, Title 22, are used as criteria in the determination of a soil as a hazardous waste.

Three of the 11 metals required for analysis were done so as indicator parameters. These constituents - boron, fluoride and magnesium - are constituents of the materials that were burned or detonated in these three RCRA units.

The tabular results in Tables 10, 11 and 12 and as summarized in Table 2 show that all three of these constituents, with the exception of fluoride at the Burn Area, are found in concentrations similar to the concentrations of these constituents determined in the background area soils.

Of the three constituents, only fluoride has a published TTLC and the levels found in the soils at these RCRA units are at least sixty times less than this TTLC.

The remaining constituents analyzed in the soils at the three RCRA units are commonly known as the RCRA metals. The results of the analysis for each of the RCRA units is discussed below.

B. Burn Area

In the soils sampled at the Burn Area, three of the eight RCRA metals analyzed had average concentrations greater than the concentrations determined at the background sampling location. These three compounds are barium, cadmium and lead. The barium, cadmium and lead average concentrations, while statistically greater than the background averages, are influenced by a few relatively high concentrations from seperate and isolated soil samples. There is no pattern to the detectable concentrations when comparing the tabular results of the samples to the area in which the samples were taken. No "hot spots" or areas of contamination are identifiable.

All detectable concentrations of barium except one are at least one order of magnitude less than the TTLC for barium. The one detectable concentration of barium that is not at least one

order of magnitude less has a value of 2250 parts per million (ppm) compared to the TTLC of 10,000 ppm and therefore poses no threat to the environmental or the public health.

The same is true for the detectable cadmium concentrations. The one sample with a concentration not at least one order of magnitude less than the TTLC has a value of 12.7 ppm compared to the TTLC of 100 ppm, which is not considered a threat.

There are two samples from the Burn Area with concentrations of lead not at least one order of magnitude less than the TTLC for lead. The concentrations of these two are 170 ppm and 263 ppm compared to the TTLC of 1000 ppm, neither of which poses a threat to the environmental or the public health.

C. Burn Cage, Pans and Rails Area

Three of the RCRA metals analyzed had average concentrations greater than the concentrations in the soils of the background sampling area. These metals are: barium, cadmium and lead. As with the Burn Area, the averages are influenced by a few seperate and isolated above background concentrations. Again, there is no pattern to these concentrations and no areas of contamination are identifiable. All of the concentrations are at least one order of magnitude less than the respective TTLC's.

D. East Fork Area

At this RCRA unit, only cadmium and lead have average concentrations with values statistically greater than the background soils. The only concentrations of cadmium found were in the top one foot soil horizon of this RCRA unit, although one sample had a detectable concentration at the 3 to

4 foot depth. All of the samples with detectable concentrations of cadmium except one are at least one order of magnitude less than the TTLC for cadmium. The one sample at the 3 to 4 foot depth had a concentration of 72 ppm which is less than the TTLC for cadmium of 100 ppm. This apparent anomaly is uncharacteristic of the other values and is considered an outlier.

There is no pattern to the lead concentrations and the above background values. The actual concentrations are all at least one order of magnitude less than the TTLC for lead. No areas of contamination are identifiable.

V. SUMMARY AND CONCLUSIONS

Verification sampling was performed at the three RCRA units in accordance with the approved Closure Plan and in accordance with proper EPA sampling and analyses protocol. The results of the verification sampling indicate that the three RCRA units are free of hazardous waste and hazardous constituents. The three RCRA units: Burn Area; Burn Cage, Pans and Rails Area; and East Fork Area are considered clean and have been closed in accordance with the approved Closure Plan.

LIST OF TABLES

LIST OF ATTACHMENTS

TABLE 1

Compounds Specified for Analysis from the Soils at the Three RCRA Units: Burn Area; Burn Cage, Pans and Rails Area; East Fork Area

Specified Metals Analysis	Specified Organics Analysis
arsenic	diphenylamine
barium	butyl carbitol
boron	dibutyl pthalate
cadmium	diphenyl guinidine
chromium	quinone
fluoride	
lead	
magnesium	
mercury	
selenium	
silver	

TABLE 2

Comparison of Mean Metal Concentrations in Soil with Hazardous Waste Criteria

(all units mg/kg)

Constituent	TTLC (mg/kg)	Burn Area	BCPR Area	East Fork	Background
Arsenic	500	2.9	4.9	4.9	4.6
Barium	10,000	131	91	51	52
Boron	--	6.5	9.4	5.6	5.7
Cadmium	100	1.0	0.8	3.4	0.5
Chromium	500	29	<50	<50	50
Fluoride	18,000	<2	280	300	184
Lead	1000	22	18	10.9	3.7
Magnesium	--	3489	1936	1896	1536
Mercury	20	<0.2	<0.1	<0.1	<.10
Selenium	100	<1	<0.5	<0.5	<.50
Silver	500	2.5	<3	<3	3.0

Concentrations for RCRA units are calculated means (see Tables 2-9)
TTLC = Total Threshhold Limit Concentration (mg/kg in Soil, Sec. 66699, Article 11, Pg. 1800.77 - Title 22 California Health & Safety Code
BCPR = Burn Cage Pans and Rails Area

ATTACHMENT 1

APPENDIX VIII HAZARDOUS CONSTITUENTS ANALYLZED IN THE INITIAL SAMPLE OF EACH OF THE THREE RCRA UNITS

40 CFR 261 APPENDIX VIII HAZARDOUS CONSTITUENTS TO BE TESTED FOR

The following compounds have been selected from Appendix VIII of 40 CFR 261 as having been possibly used during production and/or research and development at the Bermite facility. The complete list of Appendix VIII constituents was reviewed by the former chief chemist and the former vice president of research and development of Bermite. According to these experts, the compounds from Appendix VIII not listed below were not used or created at Bermite, nor are they products of reaction or products of degradation.

Antimony Compounds (NOS) - Antimony Trisulphide

Barium Compounds (NOS) - Barium Nitrate

Benzene

Beryllium

Butyl Acetate

Calcium Chromate

Carbon Disulfide

Chloroform

Dichloromethane

Dinitrobenzene

Diphenylamine

Formaldehyde

Hexachloroethane

Hydrofluoric Acid

Isobutyl Alcohol

Lead Compounds (NOS) - Lead Azide, Lead Styphnate, Lead

Methyl Ethyl Ketone

Methyl Methacrylate

Naphthalene

Nickel

Oxides

Potassium Cyanide

Potassium Perchlorate

Thallium

Toluene

1,1,1-Trichloroethane

ATTACHMENT 2

TABULAR RESULTS OF METALS ANALYSIS FROM THE THREE RCRA UNITS

ANALYSIS RESULTS FROM
SOIL SAMPLING AT
RCRA UNITS

TABLE 6

File = BA01

BURN AREA - METAL CONCENTRATIONS

All Values Are mg/kg (ppm)

SAMPLE I.D.	SAMPLE Depth	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
BA-10737-1	0.0-0.5'	ND	73	ND	14	8.1	ND	ND	ND
BA-10737-2	0.5-1.0'	ND	75	ND	14	14	ND	ND	ND
BA-10737-3	1.5-2.0'	ND	68	ND	13	27	ND	ND	0.80
BA-10737-4	2.5-3.0'	ND	78	ND	15	12	ND	ND	ND
BA-10737-5	3.5-4.0'	2.0	65	ND	14	22	ND	ND	ND
BA-10737-6	4.5-5.0'	ND	55	ND	10	17	ND	ND	ND
BA-10737-7	5.5-6.0'	ND	69	ND	12	15	ND	ND	0.41
BA-10737-8	6.5-7.0'	ND	63	ND	14	16	ND	ND	ND
BA-10737-9	7.5-8.0'	ND	204	ND	22	8.7	ND	ND	ND
BA-10737-10	8.5-9.0'	ND	28	ND	20	ND	ND	ND	ND
BA-6833-1	0.0-0.5'	ND	89	ND	17	22	ND	ND	ND
BA-6833-2	0.5-1.0'	2.2	60	ND	15	17	ND	ND	ND
BA-6833-3	1.5-2.0'	2.0	84	ND	21	35	ND	ND	0.44
BA-6833-4	2.5-3.0'	ND	94	ND	18	60	ND	ND	1.3
BA-6833-5	3.5-4.0'	2.1	71	ND	14	7.1	ND	ND	ND
BA-6833-6	4.5-5.0'	2.7	101	ND	17	52	ND	ND	7.4
BA-6833-7	5.5-6.0'	ND	168	ND	34	46	ND	ND	ND
BA-6833-8	6.5-7.0'	ND	158	2.3	38	50	ND	ND	0.77
BA-6833-9	7.5-8.0'	ND	ND	ND	7	ND	ND	ND	ND
BA-6833-10	8.5-9.0'	ND	54	2.7	12	ND	ND	ND	ND
BA-6125-1	0.0-0.5'	2.1	39	ND	13	ND	ND	ND	0.44
BA-6125-2	0.5-1.0'	ND	64	ND	16	59	ND	ND	1.4
BA-6125-3	1.5-2.0'	5.0	72	ND	ND	18	ND	ND	ND
BA-6125-4	2.5-3.0'	ND	28	ND	11	18	ND	ND	ND
BA-6125-5	3.5-4.0'	2.4	39	2.8	24	170	ND	ND	2.5
BA-6125-6	4.5-5.0'	ND	45	ND	14	27	ND	ND	ND
BA-6125-7	5.5-6.0'	ND	2250	ND	666	ND	ND	ND	ND
BA-6125-8	6.5-7.0'								
BA-6125-9	7.5-8.0'	2.1	304	4.9	15	ND	ND	ND	ND
BA-6125-10	8.5-9.0'	ND	60	ND	11	ND	ND	ND	ND
BA-2231-1	0.0-0.5'	2.6	69	ND	14	ND	ND	ND	0.43
BA-2231-2	0.5-1.0'	2.9	51	ND	11	ND	ND	ND	ND
BA-2231-3	1.5-2.0'	2.4	215	12.7	64	263	ND	ND	5.7
BA-2231-4	2.5-3.0'	ND	47	3.0	8	22	ND	ND	0.86
BA-2231-5	3.5-4.0'	4.0	259	ND	44	57	ND	ND	0.88
BA-2231-6	4.5-5.0'	ND	51	ND	11	ND	ND	ND	ND
BA-2231-7	5.5-6.0'	ND	41	ND	13	ND	ND	ND	ND
BA-2231-8	6.5-7.0'	ND	126	ND	16	ND	ND	ND	ND
BA-2231-9	7.5-8.0'	ND	48	ND	11	ND	ND	ND	0.40
BA-2231-10	8.5-9.0'	ND	34	ND	14	ND	ND	ND	ND

ANALYSIS RESULTS FROM
SOIL SAMPLING AT
RCRA UNITS

File = BADI

TABLE 6

BURN AREA - METAL CONCENTRATIONS

All Values Are mg/kg (ppm)

SAMPLE I.D.	SAMPLE Depth	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
BA-4132-1	0.0-0.5'								
BA-4132-2	0.5-1.0'	ND	50	9.5	19	66	ND	ND	ND
BA-4132-3	1.5-2.0'	ND	75	ND	10	ND	ND	ND	ND
BA-4132-4	2.5-3.0'	2.0	43	ND	8	ND	ND	ND	0.43
BA-4132-5	3.5-4.0'	ND	45	ND	5	ND	ND	ND	ND
BA-4132-6	4.5-5.0'	2.0	221	ND	8	ND	ND	ND	ND
BA-4132-7	5.5-6.0'	2.1	306	ND	10	ND	ND	ND	ND
BA-4132-8	6.5-7.0'	ND	256	ND	7	8.7	ND	ND	0.43
BA-4132-9	7.5-8.0'	ND	31	ND	ND	ND	ND	ND	ND
BA-4132-10	8.5-9.0'	ND	32	ND	ND	ND	ND	ND	ND
BA-5828-1	0.0-0.5'	ND	56	ND	15	ND	ND	ND	ND
BA-5828-2	0.5-1.0'	ND	55	ND	13	ND	ND	ND	0.42
BA-5828-3	1.5-2.0'	ND	49	ND	10	13	ND	ND	ND
BA-5828-4	2.5-3.0'	ND	52	ND	10	13	ND	ND	0.86
BA-5828-5	3.5-4.0'	ND	41	ND	9	ND	ND	ND	ND
BA-5828-6	4.5-5.0'	ND	680	ND	155	7.6	ND	ND	ND
BA-5828-7	5.5-6.0'	ND	410	ND	15	ND	ND	ND	ND
BA-5828-8	6.5-7.0'	ND	38	ND	9	ND	ND	ND	ND
BA-5828-9	7.5-8.0'	ND	39	ND	8	ND	ND	ND	ND
BA-5828-10	8.5-9.0'	ND	42	ND	10	ND	ND	ND	ND
BA-10615-1	0.0-0.5'	ND	55	ND	11	12	ND	ND	ND
BA-10615-2	0.5-1.0'	ND	65	ND	8	22	ND	ND	1.2
BA-10615-3	1.5-2.0'	ND	123	ND	24	75	ND	ND	2.3
BA-10615-4	2.5-3.0'	ND	77	ND	15	33	ND	ND	0.40
BA-10615-5	3.5-4.0'	ND	69	ND	13	17	ND	ND	ND
BA-10615-6	4.5-5.0'								
BA-10615-7	5.5-6.0'	2.6	37	ND	12	41	ND	ND	ND
BA-10615-8	6.5-7.0'								
BA-10615-9	7.5-8.0'	ND	78	ND	17	23	ND	ND	ND
BA-10615-10	8.5-9.0'	ND	57	ND	11	ND	ND	ND	ND
Detection Limit		2.0	5	+0.50	5	5.0	0.20	1.0	+3.0
Average Concentration		2.9	131	1.0	29	22	0.20	1.0	2.5
Upper Confidence Limit		2.9	189	1.4	46	31	0.20	1.0	2.8
Lower Confidence Limit		2.8	72	0.6	12	14	0.20	1.0	2.2

ANALYSIS RESULTS FROM
SOIL SAMPLING AT
RCRA UNITS

TABLE 6

File = BA01

BURN AREA - METAL CONCENTRATIONS

All Values Are mg/kg (ppm)

SAMPLE I.D.	SAMPLE Depth	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
Sample Standard Deviation		0.4	285	2.0	82	40	--	--	1.3
Sample Variance		0.2	81334	3.9	6769	1597	--	--	1.6
Coefficient of Variation		15.5	218	192	286	178	--	--	50
Maximum Value		5.0	2250	12.7	666	263	ND	ND	7.4
Total Number of Samples		66	66	66	66	66	66	66	66
Background Average		4.6	52	0.50	50	3.7	0.10	0.50	3.0
Background Variance		1.0	35	0.00	0	3.4	0.00	0.00	0.0
t*		-7.9	2.2	2.2	-2.1	3.8			-3.3
t'		1.7	1.7	1.7	1.7	1.7			1.7

NOTE:

All No Detection (ND) Values have been given
a value equal to the detection limit
for purposes of calculation

Std Dev. and Var are based on n - 1

t* = (sample avg. - background avg.)/sqrt((sample var./# samples)+background var./# samples))

If t* > t' then sample avg. # background avg.

The detection limit from the background samples

ANALYSIS RESULTS FROM
SOIL SAMPLING AT
RCRA UNITS

File = BCPRD2

TABLE 7

BURN CAGE, PANS AND RAILS AREA - METAL CONCENTRATIONS

All Values Are mg/kg (ppm)

SAMPLE I.D.	SAMPLE Depth	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver
BCPR-11038-1	0.0-0.5'	3.0	75	ND	ND	ND	8.0	ND	ND	ND
BCPR-11038-1	0.5-1.0'	3.0	70	ND	ND	10	8.0	ND	ND	ND
BCPR-11038-1	1.0-2.0'	ND	50	ND	ND	10	4.0	ND	ND	ND
BCPR-11038-1	2.0-3.0'	8.0	620	1.4	ND	28	82	ND	ND	ND
BCPR-11543-1	0.0-0.5'	4.0	65	0.50	ND	12	12	ND	ND	ND
BCPR-11543-2	0.5-1.0'	3.0	55	ND	ND	ND	4.0	ND	ND	ND
BCPR-11543-3	1.0-2.0'	5.0	60	0.60	ND	40	30	ND	ND	ND
BCPR-11543-4	2.0-3.0'	5.0	55	ND	ND	ND	4.0	ND	ND	ND
BCPR-10617-1	0.0-0.5'	4.0	55	ND	ND	10	8.0	ND	ND	ND
BCPR-10617-2	0.5-1.0'	ND	50	ND	ND	ND	8.0	ND	ND	ND
BCPR-10617-3	1.0-2.0'	3.0	ND	ND	ND	ND	4.0	ND	ND	ND
BCPR-10617-4	2.0-3.0'	4.0	ND	ND	ND	10	4.0	ND	ND	ND
BCPR-8113-1	0.0-0.5'	4.0	ND	ND	ND	10	8.0	ND	ND	ND
BCPR-8113-2	0.5-1.0'	4.0	75	ND	ND	ND	6.0	ND	ND	ND
BCPR-8113-3	1.0-2.0'	4.0	60	4.6	ND	20	14	ND	ND	ND
BCPR-8113-4	2.0-3.0'	6.0	ND	ND	ND	ND	4.0	ND	ND	ND
BCPR-6036-1	0.0-0.5'	5.0	80	1.0	ND	32	24	ND	ND	ND
BCPR-6036-2	0.5-1.0'	5.0	60	ND	ND	10	6.0	ND	ND	ND
BCPR-6036-3	1.0-2.0'	4.0	65	1.0	ND	22	18	ND	ND	ND
BCPR-6036-4	2.0-3.0'	5.0	70	ND	ND	ND	6.0	ND	ND	ND
BCPR-5729-1	0.0-0.5'	7.0	90	0.50	ND	14	10	ND	ND	ND
BCPR-5729-2	0.5-1.0'	4.0	65	ND	ND	12	8.0	ND	ND	ND
BCPR-5729-3	1.0-2.0'	4.0	70	0.80	ND	24	26	ND	ND	ND
BCPR-5729-4	2.0-3.0'	5.0	500	1.0	ND	42	110	ND	ND	ND
BCPR-3219-1	0.0-0.5'	6.0	70	0.70	ND	38	42	ND	ND	ND
BCPR-3219-2	0.5-1.0'	6.0	65	1.0	ND	42	26	ND	ND	ND
BCPR-3219-3	1.0-2.0'	6.0	80	1.2	ND	76	54	ND	ND	ND
BCPR-3219-4	2.0-3.0'	7.0	100	1.2	ND	82	62	ND	ND	ND
BCPR-2138-1	0.0-0.5'	5.0	65	0.50	ND	14	14	ND	ND	ND
BCPR-2138-2	0.5-1.0'	5.0	70	ND	ND	10	10	ND	ND	ND
BCPR-2138-3	1.0-2.0'	8.0	90	1.0	ND	68	40	ND	ND	ND
BCPR-2138-4	2.0-3.0'									

ANALYSIS RESULTS FROM
SOIL SAMPLING AT
RCRA UNITS

File = BCPR02

TABLE 7

BURN CASE, PADS AND RAILS AREA - METAL CONCENTRATIONS

All Values Are mg/kg (ppm)

SAMPLE I.D.	SAMPLE Depth	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver
BCPR-2416-1	0.0-0.5'	6.0	55	ND	ND	12	10	ND	ND	ND
BCPR-2416-2	0.5-1.0'	6.0	50	ND	ND	ND	54	ND	ND	ND
BCPR-2416-3	1.0-2.0'	6.0	60	0.80	ND	68	28	ND	ND	ND
BCPR-2416-4	2.0-3.0'	7.0	50	ND	ND	10	6.0	ND	ND	ND
BCPR-3103-1	0.0-0.5'	5.0	ND	ND	ND	ND	4.0	ND	ND	ND
BCPR-3103-2	0.5-1.0'	6.0	ND	ND	ND	ND	4.0	ND	ND	ND
BCPR-3103-3	1.0-2.0'	9.0	75	ND	ND	12	4.0	ND	ND	ND
BCPR-3103-4	2.0-3.0'	7.0	60	ND	ND	10	8.0	ND	ND	ND
BCPR-1706-1	0.0-0.5'	4.0	95	ND	ND	19	7.0	ND	ND	ND
BCPR-1706-2	0.5-1.0'	ND	ND	ND	ND	ND	4.0	ND	ND	ND
BCPR-1706-3	1.0-2.0'	ND	ND	ND	ND	ND	4.0	ND	ND	ND
BCPR-1706-4	2.0-3.0'	ND	70	ND	ND	12	14	ND	ND	ND
BCPR-0925-1	0.0-0.5'	3.0	100	ND	ND	10	6	ND	ND	ND
BCPR-0925-2	0.5-1.0'	4.0	60	6.0	ND	18	16	ND	ND	ND
BCPR-0925-3	1.0-2.0'	4.0	60	ND	ND	14	10	ND	ND	ND
BCPR-0925-4	2.0-3.0'	4.0	85	ND	ND	10	22	ND	ND	ND
Detection Limit		3.0	50	0.50	50	10	4.0	0.10	0.50	3.0
Average Concentration		4.9	91	0.83	50	20	18	0.10	0.50	3.0
Upper Confidence Limit		5.2	116	1.1	50	25	24	0.10	0.50	3.0
Lower Confidence Limit		4.5	65	0.58	50	16	13	0.10	0.50	3.0
Sample Standard Deviation		1.5	106	0.99	--	19	22	--	--	--
Sample Variance		2.4	11130	0.99	--	355	491	--	--	--
Coefficient of Variation		32	117	120	--	92	120	--	--	--
Maximum Value		9.0	620	6.0	ND	82	110	ND	ND	ND
Total Number of Samples		47	47	47	47	47	47	47	47	47

ANALYSIS RESULTS FROM
SOIL SAMPLING AT
RCRA UNITS

TABLE 7

File = SCPR02

BURN CAGE, PANS AND RAILS AREA - METAL CONCENTRATIONS

All Values Are ug/kg (ppm)

SAMPLE I.D.	SAMPLE Depth	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver
Background Average		4.6	52	0.50	50	11	3.7	0.10	0.50	3.0
Background Variance		1.0	35	0.00	0	7.5	3.4	0.00	0.00	0.0
t*		0.9	2.5	2.2		3.5	4.5			
t'		1.7	1.7	1.7		1.7	1.7			

NOTE:

All No Detection (ND) Values have been given
a value equal to the detection limit
for purposes of calculation

Std Dev. and Var are based on n - 1

t* = (sample avg. - background avg.)/sqrt((sample var./# samples)+background var./# samples))

if t* > t' then sample avg. ≠ background avg.

ANALYSIS RESULTS FROM
SOIL SAMPLING AT
RCRA UNITS

File = EFA02

TABLE 8

EAST FORK DETONATION AREA - METAL CONCENTRATIONS

All Values Are ug/kg (ppm)

SAMPLE I.D.	SAMPLE Depth	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver
EFA-6633-1	0.0-0.5'	5.0	ND	0.80	ND	ND	6.0	ND	ND	ND
EFA-6633-2	0.5-1.0'	5.0	ND	4.0	ND	ND	20	ND	ND	ND
EFA-6633-3	1.0-2.0'	10	ND	ND	ND	ND	58	ND	ND	ND
EFA-6633-4	2.0-3.0'	5.0	ND	ND	ND	ND	6.0	ND	ND	ND
EFA-6633-5	3.0-4.0'	5.0	ND	ND	ND	ND	110	ND	ND	ND
EFA-6633-6	4.0-5.0'	8.0	ND	ND	ND	ND	6.0	ND	ND	ND
EFA-6633-7	5.0-6.0'	7.0	ND	ND	ND	ND	4.0	ND	ND	ND
EFA-6633-8	6.0-7.0'	7.0	ND	ND	ND	ND	6.0	ND	ND	ND
EFA-6633-9	7.0-8.0'	9.0	ND	ND	ND	ND	6.0	ND	ND	ND
EFA-1511-1	0.0-0.5'	5.0	ND	4.2	ND	ND	14	ND	ND	ND
EFA-1511-2	0.5-1.0'	4.0	ND	7.2	ND	ND	10	ND	ND	ND
EFA-1511-3	1.0-2.0'	5.0	ND	4.4	ND	ND	10	ND	ND	ND
EFA-1511-4	2.0-3.0'	5.0	ND	ND	ND	ND	6.0	ND	ND	ND
EFA-1511-5	3.0-4.0'	ND	ND	ND	ND	ND	4.0	ND	ND	ND
EFA-1511-6	4.0-5.0'	ND	ND	ND	ND	ND	4.0	ND	ND	ND
EFA-1511-7	5.0-6.0'	4.0	ND	ND	ND	ND	6.0	ND	ND	ND
EFA-1511-8	6.0-7.0'	6.0	ND	ND	ND	ND	8.0	ND	ND	ND
EFA-1511-9	7.0-8.0'	6.0	ND	ND	ND	12	5.0	ND	ND	ND
EFA-5714-1	0.0-0.5'									
EFA-5714-2	0.5-1.0'	7.0	ND	4.0	ND	ND	22	ND	ND	ND
EFA-5714-3	1.0-2.0'	5.0	ND	4.0	ND	ND	22	ND	ND	ND
EFA-5714-4	2.0-3.0'	ND	ND	2.0	ND	ND	8.0	ND	ND	ND
EFA-5714-5	3.0-4.0'	3.0	ND	0.50	ND	ND	6.0	ND	ND	ND
EFA-5714-6	4.0-5.0'	3.0	ND	0.50	ND	ND	6.0	ND	ND	ND
EFA-5714-7	5.0-6.0'	5.0	ND	0.50	ND	ND	6.0	ND	ND	ND
EFA-5714-8	6.0-7.0'	6.0	ND	ND	ND	ND	6.0	ND	ND	ND
EFA-5714-9	7.0-8.0'	8.0	50	ND	ND	ND	6.0	ND	ND	ND
EFA-3709-1	0.0-0.5'	4.0	ND	6.0	ND	ND	14	ND	ND	ND
EFA-3709-2	0.5-1.0'	3.0	ND	4.0	ND	ND	12	ND	ND	ND
EFA-3709-3	1.0-2.0'	4.0	ND	6.0	ND	ND	6.0	ND	ND	ND
EFA-3709-4	2.0-3.0'	8.0	60	ND	ND	ND	6.0	ND	ND	ND
EFA-3709-5	3.0-4.0'	6.0	ND	ND	ND		4.0	ND	ND	ND
EFA-3709-6	4.0-5.0'	6.0	ND	ND	ND	ND	6.0	ND	ND	ND
EFA-3709-7	5.0-6.0'	8.0	ND	ND	ND	ND	6.0	ND	ND	ND
EFA-3709-8	6.0-7.0'	ND	ND	ND	ND	ND	4.0	ND	ND	ND
EFA-3709-9	7.0-8.0'	10	78	ND	ND	ND	8.0	ND	ND	ND

ANALYSIS RESULTS FROM
SOIL SAMPLING AT
RCRA UNITS

TABLE 8

File = EFA02

EAST FORK DETONATION AREA - METAL CONCENTRATIONS

All Values Are mg/kg (ppm)

SAMPLE I.D.	SAMPLE Depth	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver
EFA-2220-1	0.0-0.5'	5.0	ND	8.0	ND	ND	20	ND	ND	ND
EFA-2220-2	0.5-1.0'	3.0	ND	6.0	ND	ND	16	ND	ND	ND
EFA-2220-3	1.0-2.0'	ND	ND	24	ND	ND	8.0	ND	ND	ND
EFA-2220-4	2.0-3.0'	3.0	ND	0.80	ND	ND	4.0	ND	ND	ND
EFA-2220-5	3.0-4.0'	4.0	ND	72	ND	ND	6.0	ND	ND	ND
EFA-2220-6	4.0-5.0'	4.0	ND	ND	ND	ND	6.0	ND	ND	ND
EFA-2220-7	5.0-6.0'	ND	ND	ND	ND	ND	24	ND	ND	ND
EFA-2220-8	6.0-7.0'	ND	ND	ND	ND	ND	4.0	ND	ND	ND
EFA-2220-9	7.0-8.0'	4.0	ND	ND	ND	ND	6.0	ND	ND	ND
EFA-0240-1	0.0-0.5'	4.0	ND	2.2	ND	ND	12	ND	ND	ND
EFA-6633-2	0.5-1.0'	4.0	ND	ND	ND	ND	6.0	ND	ND	ND
EFA-6633-3	1.0-2.0'	5.0	ND	ND	ND	ND	4.0	ND	ND	ND
EFA-6633-4	2.0-3.0'	ND	ND	ND	ND	ND	4.0	ND	ND	ND
EFA-6633-5	3.0-4.0'	3.0	ND	ND	ND	ND	4.0	ND	ND	ND
EFA-6633-6	4.0-5.0'	3.0	ND	ND	ND	10	ND	ND	ND	ND
EFA-6633-7	5.0-6.0'	ND	ND	ND	ND	ND	ND	ND	ND	ND
EFA-6633-8	6.0-7.0'	4.0	ND	ND	ND	16	ND	ND	ND	ND
EFA-6633-9	7.0-8.0'	5.0	ND	ND	ND	ND	4.0	ND	ND	ND
Detection Limit		3.0	50	0.50	50	10	4.0	0.10	0.50	3.0
Sample Average Concentration		4.9	51	3.4	50	10	11	0.10	0.50	3.0
Upper Confidence Limit		5.3	52	5.8	50	10	15	0.10	0.50	3.0
Lower Confidence Limit		4.5	50	0.99	50	10.0	7.1	0.10	0.50	3.0
Sample Standard Deviation		1.9	4.1	10	--	0.87	16	--	--	--
Sample Variance		3.7	16	108	--	0.76	269	--	--	--
Coefficient of Variation		39	8.0	306	--	8.6	151	--	--	--
Maximum Value		10	78	72	ND	16	110	ND	ND	ND
Total Number of Samples		53	53	53	53	52	53	53	53	53

File = EFAD2

EAST FORK DETONATION AREA - METAL CONCENTRATIONS

All Values Are ug/kg (ppm)

SAMPLE I.D.	SAMPLE Depth	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver
Background Average		4.6	52	0.50	50	11	3.7	0.10	0.50	3.0
Background Variance		1.0	35	0.00	0	7.5	3.4	0.00	0.00	0.0
t*		1.0	-1.1	2.0		-1.0	3.2			
t'		1.7	1.7	1.7		1.7	1.7			

NOTE:

All No Detection (ND) Values have been given
a value equal to the detection limit
for purposes of calculation

Std Dev. and Var are based on n - 1

t = (sample avg. - background avg.)/sqrt((sample var./# samples)+background var./# samples))

If t* > t then sample avg. ≠ background avg.

a value equal to the detection value
for purposes of calculation

ANALYSIS RESULTS FROM
SOIL SAMPLING AT
RCRA UNITS

TABLE 11

File = BCPRBFM

BURN CAGE, PAKS AND RAILS AREA - INDICATOR PARAMETERS

All Values Are mg/kg (ppm)

SAMPLE I.D.	SAMPLE Depth	Boron	Flouride	Magnesium
BCPR-11038-1	0.0-0.5'	9.0	250	1670
BCPR-11038-1	0.5-1.0'	6.0	250	1870
BCPR-11038-1	1.0-2.0'	ND	250	1400
BCPR-11038-1	2.0-3.0'	9.0	250	3600
BCPR-11543-1	0.0-0.5'	15	200	1620
BCPR-11543-2	0.5-1.0'	12	250	1790
BCPR-11543-3	1.0-2.0'	5.0	300	1630
BCPR-11543-4	2.0-3.0'	7.0	250	2060
BCPR-10617-1	0.0-0.5'	7.0	250	1800
BCPR-10617-2	0.5-1.0'	ND	350	1440
BCPR-10617-3	1.0-2.0'	ND	250	1440
BCPR-10617-4	2.0-3.0'	ND	250	1300
BCPR-8113-1	0.0-0.5'	5.0	400	1600
BCPR-8113-2	0.5-1.0'	ND	200	200
BCPR-8113-3	1.0-2.0'	42	ND	1730
BCPR-8113-4	2.0-3.0'	6.0	400	1630
BCPR-6036-1	0.0-0.5'	9.0	350	1970
BCPR-6036-2	0.5-1.0'	7.0	350	1960
BCPR-6036-3	1.0-2.0'	5.0	350	1670
BCPR-6036-4	2.0-3.0'	7.0	250	1900
BCPR-5729-1	0.0-0.5'	10	550	2580
BCPR-5729-2	0.5-1.0'	ND	300	1900
BCPR-5729-3	1.0-2.0'	ND	250	1740
BCPR-5729-4	2.0-3.0'	7.0	200	2000
BCPR-3219-1	0.0-0.5'	15	250	2300
BCPR-3219-2	0.5-1.0'	14	300	2110
BCPR-3219-3	1.0-2.0'	8.0	350	2280
BCPR-3219-4	2.0-3.0'	8.0	300	2190
BCPR-2138-1	0.0-0.5'	8.0	250	1860
BCPR-2138-2	0.5-1.0'	6.0	350	1930
BCPR-2138-3	1.0-2.0'	10	300	2330
BCPR-2138-4	2.0-3.0'			
BCPR-2416-1	0.0-0.5'	13	300	2310
BCPR-2416-2	0.5-1.0'	14	350	2340
BCPR-2416-3	1.0-2.0'	8.0	400	1990
BCPR-2416-4	2.0-3.0'	8.0	250	2320

ANALYSIS RESULTS FROM
SOIL SAMPLING AT
RCRA UNITS

TABLE 11

File = BCPRBFM

BURN CAGE, PANS AND RAILS AREA - INDICATOR PARAMETERS

All Values Are mg/kg (ppm)

SAMPLE I.D.	SAMPLE Depth	Boron	Flouride	Magnesium
BCPR-3103-1	0.0-0.5'	8.0	350	2250
BCPR-3103-2	0.5-1.0'	7.0	100	2660
BCPR-3103-3	1.0-2.0'	9.0	ND	2410
BCPR-3103-4	2.0-3.0'	7.0	ND	2200
BCPR-1706-1	0.0-0.5'	57	300	2280
BCPR-1706-2	0.5-1.0'	18	300	1770
BCPR-1706-3	1.0-2.0'	4.0	350	1820
BCPR-1706-4	2.0-3.0'	3.0	250	1660
BCPR-0925-1	0.0-0.5'	30	400	2280
BCPR-0925-2	0.5-1.0'	11	350	1660
BCPR-0925-3	1.0-2.0'	6.0	250	1640
BCPR-0925-4	2.0-3.0'	4.0	250	1810
Detection Limit		5.0	100	500
Average Concentration		9.4	277	1936
Upper Confidence Limit		12	302	2054
Lower Confidence Limit		6.9	251	1819

NOTE:

All No Detection (ND) values have been given
a value equal to the detection value
for purposes of calculation

ANALYSIS RESULTS FROM
SOIL SAMPLING AT
RCRA UNITS

TABLE 12

File = EFABFM EAST FORK DETONATION AREA - INDICATOR PARAMETERS

All Values Are mg/kg (ppm)

SAMPLE I.D.	SAMPLE Depth	Boron	Flouride	Magnesium
EFA-6633-1	0.0-0.5'	6.0	300	2110
EFA-6633-2	0.5-1.0'	6.0	200	2030
EFA-6633-3	1.0-2.0'	10	300	3100
EFA-6633-4	2.0-3.0'	7.0	250	2060
EFA-6633-5	3.0-4.0'	6.0	400	2090
EFA-6633-6	4.0-5.0'	8.0	300	2550
EFA-6633-7	5.0-6.0'	7.0	300	2520
EFA-6633-8	6.0-7.0'	7.0	300	2230
EFA-6633-9	7.0-8.0'	8.0	500	2840
EFA-1511-1	0.0-0.5'	5.0	250	2030
EFA-1511-2	0.5-1.0'	ND	150	1880
EFA-1511-3	1.0-2.0'	5.0	150	1900
EFA-1511-4	2.0-3.0'	ND	250	2040
EFA-1511-5	3.0-4.0'	ND	ND	1280
EFA-1511-6	4.0-5.0'	ND	ND	1290
EFA-1511-7	5.0-6.0'	ND	300	1520
EFA-1511-8	6.0-7.0'	6.0	300	1490
EFA-1511-9	7.0-8.0'	6.0	300	2720
EFA-5714-1	0.0-0.5'			
EFA-5714-2	0.5-1.0'	8.0	ND	2620
EFA-5714-3	1.0-2.0'	9.0	ND	1890
EFA-5714-4	2.0-3.0'	4.0	350	1060
EFA-5714-5	3.0-4.0'	4.0	250	1450
EFA-5714-6	4.0-5.0'	4.0	250	1580
EFA-5714-7	5.0-6.0'	5.0	350	1860
EFA-5714-8	6.0-7.0'	6.0	550	2330
EFA-5714-9	7.0-8.0'	6.0	300	2360
EFA-3709-1	0.0-0.5'	5.0	350	1750
EFA-3709-2	0.5-1.0'	ND	400	1390
EFA-3709-3	1.0-2.0'	5.0	300	1850
EFA-3709-4	2.0-3.0'	5.0	300	2850
EFA-3709-5	3.0-4.0'			
EFA-3709-6	4.0-5.0'	6.0	250	2200
EFA-3709-7	5.0-6.0'	8.0	300	2560
EFA-3709-8	6.0-7.0'	ND	250	1060
EFA-3709-9	7.0-8.0'	13	350	3980

ANALYSIS RESULTS FROM
SOIL SAMPLING AT
RCRA UNITS

TABLE 12

File = EFA6FM EAST FORK DETONATION AREA - INDICATOR PARAMETERS

All Values Are ug/kg (ppm)

SAMPLE I.D.	SAMPLE Depth	Boron	Flouride	Magnesium
EFA-2220-1	0.0-0.5'	4.0	250	1720
EFA-2220-2	0.5-1.0'	4.0	ND	1510
EFA-2220-3	1.0-2.0'	4.0	250	1270
EFA-2220-4	2.0-3.0'	3.0	400	1530
EFA-2220-5	3.0-4.0'	5.0	500	1960
EFA-2220-6	4.0-5.0'	4.0	600	1550
EFA-2220-7	5.0-6.0'	3.0	600	1260
EFA-2220-8	6.0-7.0'	ND	350	540
EFA-2220-9	7.0-8.0'	4.0	550	1480
EFA-0240-1	0.0-0.5'	ND	250	2400
EFA-6633-2	0.5-1.0'	ND	200	1800
EFA-6633-3	1.0-2.0'	ND	200	1570
EFA-6633-4	2.0-3.0'	ND	350	1970
EFA-6633-5	3.0-4.0'	ND	350	1530
EFA-6633-6	4.0-5.0'	ND	400	1470
EFA-6633-7	5.0-6.0'	ND	ND	1180
EFA-6633-8	6.0-7.0'	ND	150	1500
EFA-6633-9	7.0-8.0'	6.0	200	2070
Detection Limit		5.0	100	500
Sample Average Concentration		5.6	294	1896
Upper Confidence Limit		6.0	324	2036
Lower Confidence Limit		5.2	265	1755

NOTE:
All No Detection (ND) values have been given a value equal to the detection limit for purposes of calculation

Rec. 11/6/90

Whittaker Ordnance
P.O. Box 148
2751 San Juan Road
Hollister, California 95024
408/637-5851
TWX 910-590-0457

01 November 1990
Whittaker Ordnance Ltr/Telefax:JH91-0068

U. S. Environmental Protection Agency, Region IX
Hazardous Waste Management Division
1235 Mission Street
San Francisco, CA 94103

Attention: Mr. Larry Bowerman
Chief Alternative Technology

Subject: Waste Accumulation Time Extension

Dear Mr. Bowerman:

Our facility previously coordinated with your office in July and August of this year regarding waste accumulation limit extensions we have requested through the California Department of Health Services as the lead agency on this matter. These extensions involve explosive contaminated wastes which are still awaiting transportation exemption approval through the U. S. Department of Transportation to allow shipment for off-site treatment at a permitted facility.

In accordance with my understanding of these prior discussions with Mr. Jim Burgkamp and yourself, I am notifying you of this current and hopefully last request for extension to DOHS.

If you have any questions, please do not hesitate to call me at 408-637-5851.

Thank you.

Sincerely,

Jim Hart
Environmental & Safety Coordinator

JH:vm

Whittaker

Whittaker Ordnance
P.O. Box 148
2751 San Juan Road
Hollister, California 95024
408/637-5851
TWX 910-590-0457

October 31, 1990
Whittaker Ordnance Ltr:JH91-0038

Department of Health Services
Toxic Substances Control Division
700 Heinz Street
Berkeley, CA 94704

Attn: Denise Tsuji
Senior Hazardous Materials Specialist

Dear Denise:

Due to the continuing approval process to obtain a Department of Transportation shipping exemption for our explosive contaminated wastes, Whittaker Ordnance must request an additional extension to the waste accumulation time limit beyond the November 1 date previously requested.

According to Ms. Suzanne Hedgepeth, Director of the Office of Hazardous Materials Transportation, Exemption Branch, our exemption request is currently under technical review and a decision may be available soon. She says the office is backlogged with requests and recommends another letter requesting expeditious handling, which we will submit. If you have any questions regarding the exemption the telephone number of the DOT is (202) 366-0717.

In the interim, to allow time for the completion of the approval process and to obtain approved packaging materials and to schedule shipment we respectfully request an additional 90 days extension to January 31, 1991.

If you have any questions or need any further information please call me at your earliest convenience.

Sincerely,

Jim Hart

Jim Hart
Environmental & Safety Coordinator

JH:vm

cc: Larry Bowerman, EPA, Region IX
John Dailey, Whittaker Ordnance
Gordon Louttit, Whittaker Corporation
Jerry Walsh; Cox, Castle & Nicholson

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF HEALTH SERVICES
TOXIC SUBSTANCES CONTROL PROGRAM
REGION 3
1405 N. SAN FERNANDO BOULEVARD, SUITE 300
BURBANK, CA 91504

October 19, 1990

Mr. Michael Feeley
U.S. EPA, Region IX
Hazardous Waste Management Division
Permits and Solid Waste Branch
75 Hawthorn Street
San Francisco, CA 94105

Dear Mr. Feeley:

CLOSURE OVERSIGHT REPORT FOR WHITTAKER CORP., BERMITE DIVISION, EPA ID #CAD 064573108

Enclosed is the Closure Oversight report for Whittaker Corporation, Bermite Division, located in Santa Clarita, CA. The report covers the status of closure-related activities for the facility beginning July 1, 1990 and ending September 30, 1990.

Please note that page 3, covering future regulatory strategy, should be considered confidential.

Should you have questions, please contact Alan Sorsher at (818) 567-3119.

Sincerely,

Allan Plaza
Senior Waste Management Engineer

cc: Mr. James Breitlow
U.S. EPA, Region IX
75 Hawthorn Street
San Francisco, CA 94105

Mr. Paul Blais
Hazardous Waste Management Unit
Toxic Substances Control Program
714/744 P Street
P.O. Box 924732
Sacramento, CA 94234-7320

Mr. Scott Simpson
Region 3

STATUS REPORT

CLOSURE OVERSIGHT
for

WHITTAKER CORPORATION, BERMITE DIVISION
22116 West Soledad Canyon Road, Saugus, California
EPA ID NUMBER CAD 064573108

July 1, 1990 through September 30, 1990

Prepared by:

California Department of Health Services
Toxic Substances Control Program
Region 3 - Burbank

OCTOBER 1990

CLOSURE OVERSIGHT STATUS REPORT

WHITTAKER CORPORATION, BERMITE DIVISION, SAUGUS, CALIFORNIA
EPA ID NUMBER CAD 064 573 108

OCTOBER 19, 1990

A. Introduction

This status report for the closure of the Whittaker-Bermite facility identifies the closure activities conducted, submittals by the facility and decisions made between July 1, 1990 and September 30, 1990. Facility background information was furnished in the initial closure Oversight Report dated July 1989.

B. Proposed Change of Property Ownership

On March 1, 1990, DHS received a revised Part A application accompanied by a letter from an attorney representing Anden Santa Clarita Partners, L.P. The letter notified DHS about a proposed change of ownership of the facility on March 13, 1990. The letter also explained that the limited partnership would be the new owner and that Whittaker would be a limited partner.

On July 2, 1990, Anden submitted a letter indicating that the proposed change of ownership would not be taking place.

C. Submittals Received from the Facility

1. NPDES Quarterly Report for Apr-Jun 1990, received 7/23/90.
2. Report No. 7 of Quarterly Groundwater Monitoring, dated 6/29/90.
3. Responses to Report of Violations and Schedule for Compliance, dated 9/14/90.
4. Workplans, Response to Counts 1, and 14 - Items 2 and 3a, Notice of Violations, received 9/28/90.

D. Groundwater Cleanup at 317 Impoundment

Bermite has continued to pump and treat VOC-contaminated groundwater at the site of the former 317 impoundment. Treated groundwater is discharged under an NPDES permit. Quarterly Groundwater Monitoring report 7 shows that the level of TCE has dropped to 7.8 ug/l during the April 1990 sampling, compared with 126 ug/l in January. Bermite has verbally reported that recent measurements are below the MCL of 5.0 ug/l. This should be formally reported during the October quarter.

E. Outstanding Technical Issues

As discussed in the last closure oversight report, a CME was conducted by Region 3 and DHS HQ staff on January 24 and 25 1990. A report has been been finalized and dated 6/25/90. The facility's well construction and sampling techniques were judged good, but more hydrogeologic assessment work needs to be done, and additional wells need to be installed to adequately characterize the extent of groundwater contamination.

On July 31, 1990 DHS issued a Report of Violation (ROV) and Schedule for Compliance to Bermite. The ROV included deficiencies noted in the CME Report and alleged violations of the closure plan and closure regulations as well as investigation of certain solid waste management units (SMUs) (see previous oversight report).

Whittaker responded to the ROV with submittals 3 and 4 above. Item 3 has already been reviewed and item 4 is under review.

CONFIDENTIAL

F. Regulatory/Enforcement Strategy (confidential)

After completing our review of the latest submittals, we will meet internally and with Whittaker. They appear willing to perform at least some of the work we are asking for. If we cannot convince Whittaker to voluntarily perform the remainder of the work required, we can put those items into a corrective action order.

Whittaker

Whittaker Corporation
10880 Wilshire Boulevard
Los Angeles, CA 90024-4163
213/475-9411

Edward R. Muller
Vice President
and Chief Administrative Officer

September 14, 1990

Mr. Tom Kelly
Region IX
U.S. Environmental Protection Agency
1235 Mission Street
San Francisco, California 94103

Subject: Request for Extension of Closure Period
Site 317 Impoundment
Whittaker Corporation, Bermite Division

Dear Mr. Kelly:

Whittaker Corporation, Bermite Division, is hereby requesting an extension of the completion deadline for Item 8 "complete decontamination of VOC at the site" of Schedule of Closure Activities 317 Surface Impoundment, VOC Removal. Whittaker Corporation requests that the completion deadline be extended 180 days from today's date. This letter request for an extension of closure activities is submitted in partial in response to Count 3 of Mr. Simpson's letter to Mr. Glen Abdun Nur, Whittaker Corporation, wherein 40 CFR 265.113,22 is referenced.

Whittaker Corporation, based on the approved closure plan for the 317 area, proposed excavation of impoundment soils following field testing. Whittaker initiated the staged removal and sampling in December 1987, as indicated in Progress Report No. 3 submitted to Mr. Alan Sorsher, Department of Health Services (DHS), by Mr. Norman Wenck. Excavation was still on-going in August 1988 as indicated in Progress Report No. 17 submitted similarly. This progress report clearly states the extent to which decontamination has been accomplished and outlined further actions to be taken in accordance with the approved closure plan. After excavation of the 317 impoundment soils to a depth of approximately 50 feet, an alternative mitigation option, as referenced in the approved closure plan was implemented. The alternative method for decontamination of VOC on site is underway, vapor extraction is proceeding, and extracted vapors are being catalytically oxidized through the use of an innovative catalytic oxidizer developed under contract to Whittaker Corporation by King/Buck. The development of this

cc: Mr. Al Simmons
1200 Odessa Drive
Richardson, Texas 75080

Mr. Anastacio Medina
Los Angeles County Hazardous Waste Program
2615 S. Grand Ave., 6th Floor
Los Angeles, California 90007

Mr. Andrew Hollbrook
RWQCB, Los Angeles
101 Centre Plaza Drive
Monterey Park, California 91754-2156

Mr. David W. Hogan, Assistant Planner
City of Santa Clarita
23920 Valencia Blvd., Suite 300
Santa Clarita, California 91355

Mr. Scott Simpson, Chief Facility Management Unit
Toxic Substances Control Program (Region 3)
California Department of Health Services
1405 N. San Fernando Blvd, Suite 300
Burbank, California 91504

Mr. Brian Lewis
Technical Services
Toxic Substances Control Program
713 / 744 P Street
P.O. Box 924732
Sacramento, California 94234-7320

Wenck Associates, Inc.

Consulting Engineers
(612) 475-0858

December 7, 1987

Mr. Alan Sorsher
Department of Health Services
Toxic Substances Control Division
107 S. Broadway, Room 7128
Los Angeles, California 90012

Re: Progress Report No. 3 - Implementation of Revised RCRA Closure Plan, Week of November 30, 1987

Dear Mr. Sorsher:

Work continued on the construction of the monitoring well near the 342 area and the trenching at the 317 area during this period.

The construction of the well was completed on December 5. A stainless steel casing, together with the 20 feet of stainless steel screen was installed on December 2. The gravel pack and the betonite seal were also installed on December 2. The annular space was grouted on December 3 and the well was developed on December 5.

Work on the 317 trenching proceeded to a depth of approximately 5 feet below the surface. Rainy weather prevented work from proceeding on December 4 and 5. During this period both the excavated area and the excavated soils were covered with plastic in addition to the runon prevention measures that are in place. QA/QC samples have been taken and were delivered to the laboratory on December 3.

Preliminary analytical results were received on the soil samples with the final results to be available during the next period.

Work scheduled for next period includes the initiation of the construction of the monitoring well near 317, continuation of the trenching at 317 as weather permits, and soil sampling for approximately 50 additional samples that will be analyzed for the appropriate parameters as defined in the analytical results that are expected during the week of December 7, 1987.

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

Wenck Associates, Inc.

Consulting Engineers
(612) 475-0858

Again we appreciate your interest in this project and the time that you spend with your oversite activities and your visits to the work area. If you have any questions on this matter please feel free to contact us.

Respectfully submitted,

WENCK ASSOCIATES, INC.

Norman C. Wenck, P.E.
President

NCW/msw

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

Wenck Associates, Inc.

August 25, 1988

Consulting Engineers
(612) 475-0858
FAX – (612) 476 0504

Mr. Alan Sorsher
Department of Health Services
Toxic Substances Control Division
107 South Broadway, Room 7128
Los Angeles, California 90012

Re: Progress Report No. 17 -
Approved RCRA Closure Plan Activities
Through August 26, 1988

Dear Mr. Sorsher:

Since the time of our last progress report of the RCRA Closure activities, the data compiled during the soil characterization of the 317 former surface impoundment has been sent to you in a report entitled, Soil Characterization at the 317 Area, Progress Report No. 2 dated June, 1988. In addition, a fourth RCRA groundwater monitoring well that was proposed to you on May 10, 1988 has been completed.

As was reported in the Soil Characterization at the 317 Area, Progress Report No. 2, the extent of the VOC-contaminated soils has been determined in the horizontal direction but not the vertical direction. At the 30 foot depth of the excavation at the 317 area, soils exhibiting VOC vapors are known to exist as outlined on Figure 26 of the above referenced report.

As directed by the Approved RCRA Closure Plan, verification borings are to be installed at the 317 Area to verify that the extent of VOC contamination has been determined. A plan for the installation of these was presented in the above referenced report. We discussed this plan briefly in our telephone conversation on August 5, 1988. It is our intention to install the verification borings as indicated on Figure 27 of the referenced report beginning on approximately September 12, 1988.

In accordance with the Approved RCRA Closure Plan we have decided to characterize the vertical extent of VOC-containing soils by expanding the technique of trenching at the 317 Area. This characterization and soil removal will be completed in a similar manner to the recently completed soil removal at the 317 Area.

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391-1418

Wenck Associates, Inc.

Consulting Engineers
(612) 475-0858
FAX - (612) 476-0504

We have proceeded with the necessary permission to excavate these soils from the South Coast Air Quality Management District. Attached herein you will find our correspondence and the granted exemption from District Rule 1150 pertaining to the excavation. As a result of a new District Rule, Rule 1166, a Rule 1166 Mitigation Plan for Volatile Organic Emission, as defined by the District, is required. Also enclosed herein you will find our Mitigation Plan which has been submitted to the South Coast Air Quality Management District. This plan specifies what measures will be taken to identify, remove and dispose of volatile organic compound contaminated soils from the 317 area. Pursuant to District Rule 1166, we propose to haul these soils off-site to a permitted hazardous waste landfill.

The further characterization of the VOC-contaminated soils will commence on August 29, 1988. If you have any questions or comments to this plan, please let us know.

As we discussed on August 5, 1988, we are preparing an addendum to the Soil Characterization at the 317 Area, Progress Report No. 2 which will address the analysis results of the base-neutral-acids compounds analyzed in the soils at the near bottom of the three initial excavation trenches.

You will find attached the Documentation Report on the fourth RCRA groundwater monitoring well and the RCRA groundwater monitoring system consisting of RCRA groundwater monitoring wells one through four. Well W-4 is located downgradient of the 317 former surface impoundment. As indicated in the referenced report, water samples taken from all wells show that no volatile organic compounds exist in the groundwater beneath the 317 area.

By copy of this letter we are submitting to you the revised Groundwater Sampling and Analysis Plan as a requirement of the approved RCRA Closure Plan. We have revised this plan in accordance with your letter of March 23, 1988.

The Groundwater Sampling and Analysis Plan delineates the sample plan and analytical parameters. You have indicated the desire to split sample with us for your own analysis. Please be prepared to split sample during the first sampling episode which is planned for October 4, 1988.

832 Twelve Oaks Center
15500 Wayzata Blvd
Wayzata, MN 55391-1418

Wenck Associates, Inc.

Consulting Engineers
(612) 475-0858
FAX - (612) 476-0504

Also enclosed with this progress report is a Documentation Report responding to the EPA Request for Information Regarding Potential Releases from Solid Waste Management Units at the Bermite Facility. This response indicates the existence of solid and hazardous waste management units at the Bermite facility, including the RCRA units addressed in the Approved RCRA Closure Plan, underground storage tanks formerly used at the Bermite facility, and former landfills at the site.

Please review the enclosed documents and call with any questions.

Sincerely,

WENCK ASSOCIATES, INC.

Christopher F. Thompson, P.E.

CFT/cmk
Enclosures

cc: Michael Fernandez, EPA
Larry Peterson, RWQCB
Gordon Louttit, Whittaker

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391-1418

Rec. 8/13/90

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY

GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF HEALTH SERVICES
TOXIC SUBSTANCES CONTROL PROGRAM
2151 BERKELEY WAY, ANNEX 9
BERKELEY, CA 94704

August 9, 1990

CERTIFIED MAIL

Mr. Jim Hart
Safety & Environment Coordinator
Whittaker Ordnance
P.O. Box 148
2751 San Juan Road
Hollister, California 95024

Dear Mr. Hart:

HAZARDOUS WASTE FACILITY CLOSURE

On Aug 3, 1990, we received your letter stating that you are no longer interested in a permit for your facility located at 2751 San Juan Road, Hollister, CA 95024. As we discussed, you are prohibited from treating hazardous waste at your facility. Hazardous waste produced during your operations must be sent off site in compliance with all manifest and transportation requirements.

All hazardous waste treatment units at your facility must now be closed according to subpart G of part 264 of 40 CFR and Article 23 of Title 22 CCR. Closure plan(s) for the units must be submitted within 60 days of receipt of this letter. Failure to submit the plan(s) on time may result in enforcement action against your organization.

For your reference, I am sending a checklist used to review closure plan(s), please follow the checklist in writing the plan(s). Also, subpart H of parts 264 and 265 of the 40 CFR, and Article 17 of the Title 22 CCR require all hazardous waste treatment and storage facilities to comply with the financial assurance requirements, and submit a closure cost estimate as a part of the closure plan. Please submit a detailed cost estimate of the following:

1 - Inventory management
2 - Testing for soil contamination
3 - Decontamination of all equipment
4 - Secondary containment system removal
5 - Removal of contaminated soil
6 - Certification of final closure

If you have any questions, please call Mohammad Abri at (415) 540-3944.

Sincerely,

Daniel F. Murphy
Senior Waste Management Engineer
Region 2
Toxic Substances Control Program

Cert. Mail No. P814227312

Enclosures

cc: See Next Page

cc: Denise Tsuji
Surveillance & Enforcement Unit
Toxic Substances Control Program
Region 2
2151 Berkeley Way, Annex 9
Berkeley, CA 94704

Richard Wheeler
Surveillance & Enforcement Unit
Toxic Substances Control Program
Region 2
2151 Berkeley Way, Annex 9
Berkeley, CA 94704

Nahid Zoueshtiagh
U.S. Environmental Protection Agency
Region IX
1235 Mission Street
San Francisco, CA 94103

David Sechwartzbart
Regional Water Quality Control Board
1102-A Laurel Lane
San Luis Obispo, CA 93401

David Craft
Monterey Bay Unified, APCD
1164 Monro St., Suite #10
Salinas, CA 93906

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY GEORGE DEUKMEJIAN, GOVERNOR

DEPARTMENT OF HEALTH SERVICES
TOXIC SUBSTANCES CONTROL PROGRAM (REGION 3)
1405 N. SAN FERNANDO BOULEVARD, SUITE 300
BURBANK, CA 91504
(818) 567-3000

July 25, 1990

Mr. Michael Feeley
U.S. EPA, Region IX
Hazardous Waste Management Division
Permits and Solid Waste Branch
1235 Mission Street
San Francisco, CA 94103

Dear Mr. Feeley:

CLOSURE OVERSIGHT REPORT FOR WHITTAKER CORP., BERMITE DIVISION, EPA ID #CAD 064573108

Enclosed is the Closure Oversight report for Whittaker Corporation, Bermite Division, located in Santa Clarita, CA. The report covers the status of closure-related activities for the facility beginning April 1, 1990 and ending June 30, 1990.

Please note that page 3, covering future regulatory strategy, should be considered confidential.

Should you have questions, please contact Alan Sorsher at (818) 567-3119.

Sincerely,

Dennis A. Dickerson
Regional Administrator

cc: Mr. James Breitlow
U.S. EPA, Region IX
215 Fremont Street
San Francisco, CA 94105

Mr. Paul Blais
Hazardous Waste Management Unit
Toxic Substances Control Program
714/744 P Street
P.O. Box 924732
Sacramento, CA 94234-7320

Mr. Scott Simpson
Region 3

STATUS REPORT

CLOSURE OVERSIGHT
for

WHITTAKER CORPORATION, BERMITE DIVISION
22116 West Soledad Canyon Road, Saugus, California
EPA ID NUMBER CAD 064573108

April 1, 1990 through June 30, 1990

Prepared by:

California Department of Health Services
Toxic Substances Control Program
Region 3 - Burbank

JULY 1990

CLOSURE OVERSIGHT STATUS REPORT

WHITTAKER CORPORATION, BERMITE DIVISION, SAUGUS, CALIFORNIA
EPA ID NUMBER CAD 064 573 108

JULY 25, 1990

A. Introduction

This status report for the closure of the Whittaker-Bermite facility identifies the closure activities conducted, submittals by the facility and decisions made between April 1, 1990 and June 30, 1990. Facility background information was furnished in the initial closure Oversight Report dated July 1989.

B. Proposed Change of Property Ownership

On March 1, 1990, DHS received a revised Part A application accompanied by a letter from an attorney representing Anden Santa Clarita Partners, L.P. The letter notified DHS about a proposed change of ownership of the facility on March 13, 1990. The letter also explained that the limited partnership would be the new owner and that Whittaker would be a limited partner.

On March 9, 1990, DHS responded with a letter identifying omissions in the revised Part A, and also indicated that it would reserve the right to seek enforcement action for the potential violation of not giving 90 days prior notice of a change of ownership.

Anden has recently indicated that the proposed change of ownership will not be taking place.

C. Submittals Received from the Facility

1. NPDES Quarterly Report for Jan-Mar 1990, received 4/24/90.
2. NPDES Program - Work Plan, Operation and Maintenance Plan, Contingency Plan, Sampling and Analysis/QA Plan, Reporting Plan, received 4/24/90.
3. Hydrogeological Assessment 317 and 342 Areas, received 5/21/90.
4. Report No. 6 of Quarterly Groundwater Monitoring, dated 5/31/90.

D. Groundwater Compliance Monitoring Evaluation (CME)

On January 24 and 25 1990, a CME was conducted by Region 3 and DHS HQ staff. A report has been been finalized and dated 6/25/90. The facility's well construction and sampling techniques were judged good, but more hydrogeologic assessment work needs to be done, and additional wells need to be installed to adequately characterize the extent of groundwater contamination.

The CME listed 5 areas of possible "deficiencies" and recommendations for correction.

E. Outstanding Technical Issues

These issues have not changed since they were enumerated in the last oversight report. Since the closure plan was approved 2-1/2 years ago, much has been learned about the condition of the facility. A number of technical issues at this facility still need to be resolved:

1. Although groundwater monitoring wells, soil vapor probes and extraction vents have been installed, soil and groundwater contamination at the 317 surface impoundment area have not been fully characterized.

2. Additional groundwater monitoring wells are needed at the 342 surface impoundment area.

3. Soil analysis from the burn areas have been reviewed, but the statistical tests seem to have been incorrectly applied. These will have to be recalculated.

4. The RCRA Facility Assessment prepared in 1987 by EPA's contractor, SAIC, has been evaluated by DHS and further information is being requested from the facility for several units.

5. The facility's plan to achieve clean closure on all of the hazardous waste management units may not be feasible.

Facility Meeting: As discussed in and attached to the previous oversight report, a detailed list of technical issues which was sent to the facility on March 30, 1990. A meeting was held on April 5, 1990 to discuss these items with the facility and a representative of the Regional Water Quality Control Board. The facility representatives and their consultants agreed to all the technical requests on DHS' list. As a first step, the facility submitted another hydrogeological assessment on 5/21/90, but to date, this has not been reviewed by a geologist.

In addition, Bermite has hired Delta Consultants of Sacramento.

CONFIDENTIAL

F. Regulatory Strategy (confidential)

After discussing the outstanding technical issues within DHS and with Tom Kelly of EPA, the consensus seems to be that the call-in of a post-closure permit should be delayed, and that a corrective action order or consent agreement be used to specify the work to be done to characterize and clean up (if possible) this facility. If clean closure is not achievable, a post-closure permit application would then be requested from the facility.

Recommendations from the CME will be incorporated in this corrective action order.

As a first step, we are drafting a letter containing a Report of Violations based on the CME findings and other violations of the closure regulations.

Whittaker

Whittaker Ordnance
P.O. Box 148
2751 San Juan Road
Hollister, California 95024
408/637-5851
TWX 910-590-0457

July 23, 1990
Whittaker Ordnance Ltr/Telefax:JH90-2541

U.S. Environmental Protection Agency, Region IX
Hazardous Waste Management Division
1235 Mission Street
San Francisco, CA 94103

Attention: Mr. Larry Bowerman
Chief, Alternative Technology Section

Subject: California Department of Health Services Coordination

Dear Mr. Bowerman:

We have previously been advised by the California Department of Health Services that in conjunction with our request to them for a variance with respect to the waste stream of shavings and miscellaneous work bench discard products from our loading production unit at this facility, they have coordinated the requests with your Agency.

This facility is a manufacturer of components supplied primarily to the United States Department of Defense. In the process of production and assembly of those units, our loading production unit generates small quantities of pyrotechnic and propellant shavings and scrap materials.

In response to earlier DOHS inquiries we have estimated an average waste stream quantity of about 97 pounds per month, comprised of 26 pounds of pyrotechnic and explosive contaminated wastes consisting primarily of wet paper, wood and plastic debris, 48 pounds of propellant scrap (including at least 20% water content) and 17 pounds of spent solvent. The pyrotechnic and propellant scraps are placed into DOD approved water-filled receptacles located at work stations involved. The materials used in the processing include, among other things, "Q-tips", Kleenex-type bench wipes, and similar work aids which are customarily used in precision assembly environments. The spent materials are all collected from the work stations on a periodic basis each day pursuant to procedures in compliance with DOD regulations. When collected, these materials are bagged along with some residual water and are held pending shipment to a permitted disposal facility in Louisiana.

We have been in communication with representatives of the Bureau of Explosives over a long period of time in trying to resolve the waste stream classification problem, so that the materials can be properly manifested and shipped. The time involved in obtaining this approval has caused an inordinate delay in our plan for shipping the materials, and for that reason, coordination with the California DOHS for extension of waste accumulation time limits is ongoing.

This letter is written to acknowledge that you have been informed of this information by the Department of Health Services, and to confirm that they are the lead agency for purposes of coordinating this matter.

If you have any questions, please contact the undersigned.

Very truly yours,

Jim Hart

Jim Hart
Safety & Environment Coordinator

JH:vm

CC: J. Dailey, Whittaker Ordnance
J. Walsh, Cox, Castle, and Nicholson
G. Louttit, Whittaker Corporation

Whittaker

Whittaker Corporation
10880 Wilshire Boulevard
Los Angeles, CA 90024-4163
213/475-9411

Edward R. Muller
Vice President
and Chief Administrative Officer

April 10, 1990

Mr. Alan Sorsher
State of California,
Health and Welfare Agency
Department of Health Services
Toxic Substances Control Program
1405 N. San Fernando Boulevard, Suite 300
Burbank, California 91504

Re: Bermite Division, Saugus, California
EPA ID #CAD 0645 73108

Dear Mr. Sorsher:

Whittaker Corporation ("Whittaker") hereby notifies the Department of Health Services that Whittaker has found at one of the monitoring wells on its Bermite property (MW2) electrical conductivity greater than the conductivity found at other monitoring wells on the property. Although Whittaker has no knowledge of an actual release and believes that none has occurred, it is hereby notifying the Department of a possible release.

To assess the conductivity, Whittaker is conducting regular sampling of MW2. The company is also reviewing data concerning several old and abandoned oil wells in the vicinity that may be affecting conductivity. In addition, the findings of a recent CME inspection that will soon be available may provide further information.

The enclosed letter from Mr. Al Simmons outlines more specifically Whittaker's future activities with regard to conductivity at MW2.

By copy of this letter, the U.S. EPA Region IX is also being notified in accordance with 40 CFR 269.93(c)(2).

Sincerely,

cc: Mr. Tom Kelly
U.S. EPA, Region IX
San Francisco

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY GEORGE DEUKMEJIAN, GOVERNOR

DEPARTMENT OF HEALTH SERVICES
TOXIC SUBSTANCES CONTROL PROGRAM (REGION 3)
1405 N. SAN FERNANDO BOULEVARD, SUITE 300
BURBANK, CA 91504
(818) 567-3000

Mr. Michael Feeley
U.S. EPA, Region IX
Hazardous Waste Management Division
Permits and Solid Waste Branch
1235 Mission Street
San Francisco, CA 94103

Dear Mr. Feeley:

CLOSURE OVERSIGHT REPORT FOR WHITTAKER CORP., BERMITE DIVISION, EPA ID #CAD 064573108

Enclosed is the Closure Oversight report for Whittaker Corporation, Bermite Division, located in Santa Clarita, CA. The report covers the status of closure-related activities for the facility beginning January 1, 1990 and ending March 31, 1990.

Please note that page 3, covering future regulatory strategy, should be considered confidential.

Should you have questions, please contact Alan Sorsher at (818) 567-3119.

Sincerely,

Dennis A. Dickerson
Regional Administrator

cc: Mr. James Breitlow
U.S. EPA, Region IX
215 Fremont Street
San Francisco, CA 94105

Mr. Paul Blais
Hazardous Waste Management Unit
Toxic Substances Control Program
714/744 P Street
P.O. Box 924732
Sacramento, CA 94234-7320

Mr. Scott Simpson
Region 3

STATUS REPORT

CLOSURE OVERSIGHT
for

WHITTAKER CORPORATION, BERMITE DIVISION
22116 West Soledad Canyon Road, Saugus, California
EPA ID NUMBER CAD 064573108

January 1, 1990 through March 31, 1990

Prepared by:

California Department of Health Services
Toxic Substances Control Program
Region 3 - Burbank

APRIL 1990

CLOSURE OVERSIGHT STATUS REPORT

WHITTAKER CORPORATION, BERMITE DIVISION, SAUGUS, CALIFORNIA
EPA ID NUMBER CAD 064 573 108

APRIL 1990

A. Introduction

This status report for the closure of the Whittaker-Bermite facility identifies the closure activities conducted, submittals by the facility and decisions made between January 1, 1990 and March 31, 1990. Facility background information was furnished in the previous Closure Oversight Report dated July 1989.

B. Proposed Change of Property Ownership

On March 1, 1990, DHS received a revised Part A application accompanied by a letter from an attorney representing Anden Santa Clarita Partners, L.P. The letter notified DHS about a proposed change of ownership of the facility on March 13, 1990. The letter also explained that the limited partnership would be the new owner and that Whittaker would be a limited partner.

On March 9, 1990, DHS responded with a letter identifying omissions in the revised Part A, and also indicated that it would reserve the right to seek enforcement action for the potential violation of not giving 90 days prior notice of a change of ownership.

Presently, Whittaker has temporarily delayed closing the escrow, but we expect the property to be transferred shortly.

C. Submittals Received from the Facility

1. NPDES Quarterly Report for Oct-Dec 1989, received 1/16/90
2. NPDES 1989 Annual Report, received 2/27/90
3. Report No. 5 of Quarterly Groundwater Monitoring, dated 3/16/90

D. Groundwater Compliance Monitoring Evaluation (CME)

On January 24 and 25 1990, a CME was conducted by Region 3 and DHS HQ staff. A report has been been drafted and should be finalized by the end of April 1990. The facility's well construction and sampling techniques were judged good, but more hydrogeologic assessment work needs to be done, and additional wells need to be installed to adequately characterize the extent of groundwater contamination.

E. Outstanding Technical Issues

Since the closure plan was approved two years ago, much has been learned about the condition of the facility. A number of technical issues at this facility still need to be resolved:

1. Although groundwater monitoring wells, soil vapor probes and extraction vents have been installed, soil and groundwater contamination at the 317 surface impoundment area have not been fully characterized.

2. Additional groundwater monitoring wells are needed at the 342 surface impoundment area.

3. Soil analysis from the burn areas have been reviewed, but the statistical tests seem to have been incorrectly applied. These will have to be recalculated.

4. The RCRA Facility Assessment prepared in 1987 by EPA's contractor, SAIC, has been evaluated by DHS and further information is being requested from the facility for several units.

5. The facility's plan to achieve clean closure on all of the hazardous waste management units may not be feasible.

During the past quarter, a number of submittals have been reviewed by the Region 3 Facility Permitting Unit and the Region 3 Technical Services and Support Unit. These are listed on attachment 1. Attachment 2 is a more detailed list of technical issues which were sent to the facility on March 30, 1990. A meeting has been scheduled for April 5, 1990 to discuss these items with the facility.

CONFIDENTIAL

F. Regulatory Strategy (confidential)

After discussing the outstanding technical issues within DHS and with Tom Kelly of EPA, the consensus seems to be that the call-in of a post-closure permit should be delayed, and that a corrective action order or consent agreement be used to specify the work to be done to characterize and clean up (if possible) this facility. If clean closure is not achievable, a post-closure permit application would then be requested from the facility.

Recommendations from the CME will be incorporated in this corrective action order.

ATTACHMENT 1

WHITTAKER CORP, BERMITE DIV.

DATE	TITLE	AUTHOR
2/87	PROGRESS REPORT ON RCRA CLOSURE PLAN (COPY 1)	WENCK
2/87	PROJECT PROPOSAL -- BY PIONEER CONSULTANTS &	WENCK
4/87	REVISED RCRA CLOSURE PLAN (COPY 1)	WENCK
6/87	RFA PRELIMINARY REVIEW - DRAFT	SAIC
7/87	SUBSURFACE INVESTIGATION PROGRAM	PIONEER
9/87	RFA REPORT (COP. 1, CONFIDENTIAL)	SAIC
11/87	RESPONSE TO EPA INFORMATION NEEDS	WENCK
3/88	GROUNDWATER INVESTIGATION AT 317 & 342 AREAS	WENCK
3/88	PROGRESS RPT ON SOIL CHARACT. 317 AREA	WENCK
3/88	VERIFICATION SAMPLING RESULTS AT SELECTED RCRA UNITS (COP. 1)	WENCK
5/88	RCRA GWM SYSTEM PROPOSED FINAL CONFIGURATION	WENCK
6/88	SOIL CHARACT. AT 317 AREA PROGRESS REPORT 2	WENCK
8/88	CONSTRUCT. & DEVELOP. RCRA GWM WELL #4	WENCK
8/88	GROUNDWATER SAMPLING & ANALYSIS PLAN	WENCK
8/88	DOCUMENTATION REPORT, SOLID WASTE MGMENT UNITS (COP. 1)	WENCK
12/88	RCRA GROUNDWATER SAMPLING QUARTERLY REPORT No.1 VOL 1	WENCK
12/88	RCRA GROUNDWATER SAMPLING QUARTERLY REPORT No.1 VOL 2	WENCK
12/88	RCRA GROUNDWATER SAMPLING QUARTERLY REPORT No.1 VOL 3	WENCK
2/89	SUBSURFACE VAPOR PROBE PLAN 317 AREA	WENCK
3/89	RCRA GROUNDWATER SAMPLING QUARTERLY REPORT No.2	WENCK
4/89	VAPOR PROBE CONSTR. & MEASUREMENTS @ 317 AREA	WENCK
6/89	INTERIM RESPONSE ACTION PLAN 317 SOIL & GROUNDWATER REMEDIATION --	WENCK
6/89	SPECIFIC PLAN, GROUNDWATER QUALITY ASSESSMENT PLAN	WENCK
7/89	RCRA GROUNDWATER QUARTERLY SAMPLING REPORT No.3	WENCK
9/89	CONSTRUCTION & ANALYSIS OF GRADIENT CONTROL WELL AND RCRA GWM WELLS 5 & 6	WENCK
9/89	HEALTH RISK ASSESSMENT BURN AREAS -- RISK ASSESSMENT 3 RCRA UNITS	WENCK
9/89	HEALTH RISK ASSESSMENT 317 AREA	WENCK
9/89	RCRA GROUNDWATER SAMPLING QUARTERLY REPORT No.4	WENCK
9/89	CONSTRUCTION OF VAPOR EXT VENTS & PROBES	WENCK
10/25/89	GWM SYSTEM -- STATISTICAL ANALYSIS OF DATA	WENCK

ATTACHMENT 2

I. SURFACE IMPOUNDMENT SOILS

1. Additional field work must be performed to fully determine the lateral and vertical extent of volatile organic chemicals (VOC) in the soil near the former 317 impoundment. Probes for confirming the lateral and vertical extent of VOC contamination must be installed.

a) The field instrumentation data obtained during the excavation of the various trenches indicate that the full extent of the horizontal contamination has not been defined.

- Characterization Report 2 (June 1988) shows significant OVA readings at the sides of the trenches: section 9 and 8 of trench C show 50 - 100 ppm at the sides of the trench at the 24-ft. depth. This is about 160 feet from the main hot spot and in the direction of well 4 which has detected VOC contamination.

- According to the February 1989 proposal, "Subsurface Vapor Probe Plan," OVA readings along the southern wall of trench D ranged from 0 to 900 ppm.

b) While vertical probes have indicated some strata of increased VOC contamination, the full vertical extent of the contamination has not been determined.

2. Semi-volatiles. We have examined the Health Risk Assessment for the 317 impoundment, especially for the semi-volatile constituents found. The document only lists the concentrations of the compounds found and catalogs the physical and toxicological properties of those compounds, but fails to provide any calculations to connect the concentrations found at the site to expected health effects. In addition, the unidentified semi-volatile compound must be identified in order to reach a risk conclusion about it.

3. In contrast to the statistical analysis for metals at the 317 impoundment, statistical analysis of metals at the 342 impoundment was performed by combining data from different horizons. Separate comparisons with the background area must be performed for shallow samples (1.5 -2.0 feet) and for deeper samples (17.5 - 21.0 feet). An appropriate t' must be calculated.

ATTACHMENT 2

4. The sampling report, "Verification Sampling Results at Selected RCRA Units, March 1988" must clearly discuss how the Appendix VIII sampling locations were chosen.

5. The Interim Response Action Plan, dated June 1989 included a proposal for pilot testing of an in-situ vapor extraction system for removal of VOC from the soil near the 317 impoundment. After the full extent of VOC contamination has been determined, pilot testing of the in-situ vapor extraction system must begin. An alternative remedial technique may also be proposed.

The September 1989 submittal "Construction of Vapor Extraction Vents and Vapor Probe Nests at 317 Area" mentions vapor extraction pilot tests, but no details are provided as to how the experiment will be designed and carried out. These details must be provided prior to beginning pilot testing.

II. BURN PIT AREA, BURN CAGE/PANS/RAILS AREA, & EAST FORK AREA

1. As discussed in item 3. above, data obtained by stratified random sampling should be evaluated by performing a statistical test on the various strata. For example, the data from the burn pit area might be analyzed by breaking it into two strata, 0 - 4.0 feet and 4.5 - 9.0 feet. Also, the study area may be divided vertically and the sub-areas compared with background. This should help in identifying possible hot spots which would not be obvious if all the data is averaged together. For example, the lead and cadmium at the East Fork Area seems to be limited to the top 2 feet.

2. For all tests where the number of samples in the study area and the background area differ, t' must be calculated. The March 1988 report used a constant 1.7 for all tests.

3. Data from the October 1987 study may also be used if it was obtained from an appropriate depth.

4. The indicator parameter data in tables 10, 11 and 12 of the March 1988 "Verification Sampling Results" report must be used to support the other heavy metal data.

5. Since above items may impact the interpretation of the soil sampling results for the three RCRA burning units, the Health Risk Assessment will be modified if necessary and then reviewed.

III. GROUNDWATER MONITORING

ATTACHMENT 2

1. W-2 is the only down gradient well at the 342 surface impoundment. At least two additional down gradient wells must be installed for a minimum detection monitoring system. Since statistical increases of EC have triggered assessment, more than two additional wells may be required to define the lateral and vertical extent of contamination.

2. a. Trip and field blanks must be labeled the same as samples so that the laboratory can not tell the difference.

   b. Field blanks must be collected under the same conditions as samples.

   c. Water level measurements must be accurate to the 100th of a foot. Since the last digit is not marked on the sounding tape, a ruler should be used to determine the last digit.

   d. TOX detection limits should be 5 ug/L according to SW846. If there is a reason the detection limit has been raised by the laboratory an explanation should be given.

3. Bermite must submit notification of a possible release from the 342 surface impoundment to both DHS and EPA. A statistical increase of electrical conductivity (EC) was determined in a report submitted on 26 October 1989 at which time Bermite had seven days to notify the Regional Administrator.

4. a. Monitoring wells W-4, W-5, and W-6 have not defined the lateral and vertical extent of contamination at the 317 surface impoundment area. Additional wells must be installed to determine the extent. The additional wells' data together with data from the existing wells must be delineated on a plume map.

   b. The lateral and vertical extent of VOC contamination in the vadose zone has not been determined. Additional ground water characterization must be based on an adequate vadose zone contamination delineation. Additional soil vapor probes must be installed until the entire plume of VOC contamination can be delineated.

   c. The stratigraphy at the Bermite facility has not been adequately characterized. When additional monitoring wells are installed at both surface impoundment areas, core and soil samples must be collected and together with existing data delineated on geologic cross

ATTACHMENT 2

sections. This data is crucial to placement of wells in a ground water monitoring system.

d. The constituents causing the EC increases at the 342 surface impoundment area need to be determined. If the facility believes that this EC is typical of ground water quality in this area of the facility, an additional up gradient well may have to be installed closer to the 342 area which would better represent background water quality. Also, sampling for additional parameters such as chloride may determine that non hazardous constituents are present and causing the EC increases.

IV. MISCELLANEOUS SOLID WASTE MANAGEMENT UNITS. Our review of the files indicates that solid or hazardous wastes may have been released from the following units:

1. Old Lead Azide Building and Sump:

According to the "Response to Information Needs" dated 11/4/87, soil samples were taken in the sump area and drainage area during April 1986, and showed less than 0.05 mg/l of lead. More details on this sampling are required, such as, the number, location, depth and rationale for the sampling points chosen, along with a plot plan of the unit. Additional soil sampling may be required.

2. Transfer Sump for Building 342:

This sump handled wash water from an operation which filled glass ampules of titanium tetrachloride. Titanium tetrachloride is toxic, reactive and corrosive and is an extremely hazardous waste in California. High chloride levels have been found in groundwater in the area where Building 342 existed. The location of the sump must be determined and soil samples tested for chloride.

3. Units mentioned in a Bermite company memo dated 8/26/82:

a.) The ravine above the phosphorous stabilizing area was apparently used for disposal of discarded drums. This area must be identified and sampled for hazardous waste and hazardous waste constituents. Past disposal practices may have affected groundwater at the 342 area.

ATTACHMENT 2

b.) The Hula Bowl area was apparently used as a general dump and was characterized as "a disaster area." Apparently, the area received "illegal industrial and sanitary waste," as well as dirty oil filters and was used as an oil changing station. A number of oil spills were also mentioned. This area must be identified and a sampling plan developed and implemented.

c.) Numerous spills were noted on the driveway and curbing at the paint storage area of building 228. This area must be identified and a sampling plan developed and implemented.

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY

PETE WILSON, GOVERNOR

DEPARTMENT OF HEALTH SERVICES
TOXIC SUBSTANCES CONTROL PROGRAM (REGION 3)
1405 N. SAN FERNANDO BOULEVARD, SUITE 300
BURBANK, CA 91504
(818) 567-3000

February 20, 1990

Mr. Edward R. Muller
Vice President and
Chief Administrative Officer
Whittaker Corporation
10880 Wilshire Boulevard
Los Angeles, CA 90024-4163

Dear Mr. Muller:

CLOSURE OF OPEN BURNING/DETONATION UNITS AT WHITTAKER CORP, SANTA CLARITA FACILITY, EPA ID # CAD 064573108

We have reviewed the reworked statistics calculations for the above referenced hazardous waste management units as well as the underlying data, and have carefully reviewed the closure plan requirements.

The calculations indicate a statistically significant difference compared with background in the Burn Pits Area for barium, cadmium, and lead, along with the indicator parameter, magnesium. The Burn Cage, Pans and Rails Area shows a significant statistical difference compared with background for barium, cadmium, copper, lead, and the indicator parameters, boron, magnesium and fluoride. The East Fork Detonation area shows a significant statistical difference compared with background for cadmium, lead, fluoride and magnesium.

While these calculations allow us to differentiate between contaminant concentrations in deep and shallow samples, the results do not permit us to accept clean closure certifications for these units at this time.

Recent communications from Whittaker have stated that the statistical test called for in the closure plan may not be suitable, the geology of the site makes such statistical analysis difficult, and the selected background area may not be representative of true background conditions. We disagree. In general, the accuracy of a statistical test of an area of large variance can be improved by analyzing additional sample points. Although the test is <u>also</u> used in 40 CFR Part 264 for groundwater monitoring, this does not automatically lead to the conclusion that it is inappropriate for this application.

It should also be remembered that a number of meetings were held between Whittaker, their consultants, DHS and EPA during late 1987, at which time many of the details of the closure plan were worked out. There was certainly ample opportunity at that time,

or even subsequently, to propose an alternative statistical approach. The approved closure plan allows for use of an alternative test subject to EPA and DHS approval. To date, no alternative has been recommended by Whittaker. In addition, the selection of the background area was made by Whittaker, not the agencies.

Based on our review of the work performed to date, it appears that several general approaches (or a combination of approaches) to clean closure could be considered.

1. Excavation of contaminated areas, based on current analyses. Verification samples would be required as described in the approved closure plan. We have plotted out the locations of the high level samples for each of the open burning units, but with the existing data, it is difficult to discern the boundary between the contaminated and the clean portions.

2. Modify the statistical test, possibly to use log-transformed data to possibly improve the accuracy of the statistical test and better define the areas of contamination. Then excavate contaminated areas, followed by verification samples.

3. As provided for in the closure plan, perform additional sampling and and analysis, "....as needed to establish the presence or absence of contamination or the vertical and horizontal extent of contamination." The contaminated portion of some of the units are better defined than others. This option would have the advantage of better defining the areas of contamination to reduce the excavation and disposal costs.

4. The closure plan states, "If Bermite wishes to demonstrate that any hazardous constituents left in the soils will not cause unacceptable risks to human health or the environment the data shall be of sufficient quality for the EPA and DHS to determine the environmental and health effect of the constituents." A health risk assessment (including the calculation of health-based clean closure levels) prepared by a qualified toxicologist or other health professional would be required. Guidance on the development of the assessment and the health-based clean closure levels are available from EPA guidance documents and the DHS.

We encourage Whittaker and Delta to continue to maintain close communication with DHS to finalize details. This would expedite

the review and approval of the selected closure implementation and certification.

If you have any questions, please contact Alan Sorsher at (818) 567-3119.

Sincerely,

Scott Simpson, Chief
Facility Management Branch

cc: Mr. Glen AbdunNur
Bermite Division, Whittaker Corp.
22116 West Soledad Canyon Road
Santa Clarita, CA 91350

Ms. Barbara J. Mickelson
Delta Environmental Consultants, Inc.
3330 Data Drive
Rancho Cordova, CA 95670

Mr. Anastacio Medina,
Los Angeles County Hazardous Waste Program
2615 S. Grand Ave., 6th Floor
Los Angeles, CA 90007

Mr. Andrew Hollbrook,
RWQCB, Los Angeles
101 Centre Plaza Drive
Monterey Park, CA 91754-2156

Mr. David W. Hogan, Assistant Planner
City of Santa Clarita
23920 Valencia Blvd. Suite 300
Santa Clarita, CA 91355

Mr. Tom Kelly
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105

Mr. Steve Koyasako
Office of Legal Services
Toxic Substances Control Program
713/744 P Street
P.O. Box 924732
Sacramento, CA 94234-7320

Dr. Lou Levy
DHS Region 3

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY
GEORGE DEUKMEJIAN, GOVERNOR

DEPARTMENT OF HEALTH SERVICES
TOXIC SUBSTANCES CONTROL PROGRAM (REGION 3)
1405 N. SAN FERNANDO BOULEVARD, SUITE 300
BURBANK, CA 91504
(818) 567-3000

February 1, 1990

Mr. Michael Feeley
U.S. EPA, Region IX
State Programs Branch
215 Fremont Street
San Francisco, CA 94105

Dear Mr. Feeley:

CLOSURE OVERSIGHT REPORT FOR WHITTAKER CORP., BERMITE DIVISION, EPA ID #CAD 064573108

Enclosed is the Closure Oversight report for Whittaker Corporation, Bermite Division, located in Santa Clarita, CA. The report covers the status of closure-related activities for the facility beginning July 1, 1989 and ending December 31, 1989.

Please note that page 3, covering future regulatory strategy, should be considered confidential.

Should you have questions, please contact me at (818) 567-3012.

Sincerely,

for John A. Hinton, P.E., Chief
Facility Permitting Unit

cc: James Breitlow
U.S. EPA, Region IX
215 Fremont Street
San Francisco, CA 94105

Paul Blais
Hazardous Waste Management Unit
Toxic Substances Control Program
714/744 P Street
P.O. Box 924732
Sacramento, CA 94234-7320

CLOSURE OVERSIGHT STATUS REPORT

WHITTAKER CORPORATION, BERMITE DIVISION, SAUGUS, CALIFORNIA
EPA ID NUMBER CAD 064 573 108

JANUARY 31, 1990

A. Introduction

This status report for the closure of the Whittaker-Bermite facility identifies the closure activities conducted, submittals by the facility and decisions made between July 1, 1989 and December 31, 1989. Facility background information was furnished in the previous Closure Oversight Report dated July 1989.

B. Partial Closure Certifications

A letter from DHS was sent to the facility on October 11, 1989 acknowledging clean closure certifications for six portable storage units. A similar letter was drafted for EPA and sent to the facility on November 28, 1989.

A joint letter was sent to the facility from DHS (signed December 20, 1989) and EPA (signed December 28, 1989) acknowledging clean closure for two stationary storage buildings and the lead azide treatment unit.

C. Submittals Received from the Facility

1. Report No. 3 of Quarterly Groundwater Monitoring, dated 7/13/89
2. Construction and Analysis of Gradient Control Well and RCRA Groundwater Monitoring Wells 5 & 6, dated 9/29/29.
3. Health Risk Assessment for Burn Areas, (3 RCRA units) dated 9/29/89
4. Health Risk Assessment for 317 Area dated 9/29/89
5. Construction of Vapor Extraction Vents & Probes, dated 9/29/89
6. Groundwater Monitoring System, Statistical Analysis of Data, dated 10/25/89

D. Outstanding Technical Issues

Since the closure plan was approved two years ago, much has been learned about the condition of the facility. A number of technical issues at this facility still need to be resolved:

1. Although monitoring wells and soil vapor probes and extraction vents have been installed, soil and groundwater contamination at the 317 surface impoundment area has not been fully characterized.

2. Additional groundwater monitoring wells are needed at the 342 surface impoundment area.

3. Soil analysis from the burn areas have not yet been reviewed.

4. The RCRA Facility Assessment prepared by EPA's contractor, SAIC, in 1987, has not been evaluated and the need for a RCRA Facility Investigation has not been decided by DHS and EPA.

5. The facility's plan to achieve clean closure on all of the hazardous waste management units may not be feasible.

CONFIDENTIAL

E. Regulatory Strategy (confidential)

After discussing the outstanding technical issues within DHS and with Tom Kelly of EPA, the consensus seems to be that the call-in of a post-closure permit should be delayed, and that an enforcement order or consent agreement be used to specify the work to be done to characterize and clean up (if possible) this facility. If clean closure is not achievable, a post-closure permit would then be called-in.

On January 24 and 25, 1990, a Comprehensive Monitoring Evaluation (CME) was conducted by DHS. Recommendations from the CME could be incorporated in this corrective action order.

Wenck Associates, Inc.

Consulting Engineers
(612) 475-0858
FAX – (612) 476-0504

October 24, 1989

Mr. Alan Sorsher
Department of Health Services
Toxic Substances Control Division III
1405 No. San Fernando Blvd., Suite 300
Burbank, CA 91504

Re: Addendum to Certification of Clean Closure of RCRA
Units 223, 236 and Lead Azide Area at
Bermite Division, Whittaker Corporation
22116 West Soledad Canyon Road
Saugus, California 91350

Dear Mr. Sorsher:

At your instruction, we have prepared this revised Certification of Clean Closure of the three RCRA units: Building 223, Building 236 and the Lead Azide Area at the Bermite facility. This revision addresses questions regarding the sample locations at the Lead Azide Area and the background wipe samples for comparison with the wipe samples at Buildings 223 and 236 and is presented to you for your review and approval. We have included changes to the text and tables of the original Certification of Clean Closure, dated May 9, 1988. As certified by the attached certification, these three RCRA units are free of hazardous wastes or hazardous constituents and, therefore, are considered clean and have been closed in accordance with the approved Closure Plan.

Respectfully submitted,

WENCK ASSOCIATES, INC.

Christopher F. Thompson, P.E.

CFT/rel

Enclosure

cc: Al Simmons, Whittaker
Ed Muller, Whittaker
Glen Abdun Nur
Jan Palumbo, Region IX, EPA

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391-1418

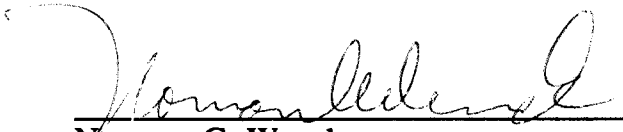
REVISED

CERTIFICATION OF CLEAN CLOSURE OF RCRA UNITS 223, 236 AND LEAD AZIDE AREA AT BERMITE DIVISION WHITTAKER CORPORATION EPA NO. CAD 064 573 108 22116 WEST SOLEDAD CANYON ROAD SAUGUS, CALIFORNIA 91350

Report Prepared by:

WENCK ASSOCIATES, INC.
832 Twelve Oaks Center
15500 Wayzata Boulevard
Wayzata, Minnesota 55391-1418
(612) 475-0858

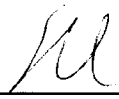
I hereby certify that the RCRA units described in this report were inspected, cleaned, tested and clean closed in accordance with the Approved Closure Plan and Modifications and that I am a duly Registered Professional Engineer under the laws of the State of California.



10-24-89

Norman C. Wenck — California Registration No. 41317

I hereby certify that the RCRA units described in this report were inspected, cleaned, tested and clean closed in accordance with the Approved Closure Plan and Modifications and that I am a duly authorized officer of Whittaker Corporation.



10-26-89

Edward R. Muller, Vice President, General Counsel — Date

I. INTRODUCTION

The Bermite Division of Whittaker Corporation discontinued operations effective April 3, 1987. The Bermite facility, at the time of closure, had interim status for 14 Resource Conservation and Recovery Act (RCRA) units. Under RCRA, a formal closure plan was required to certify closure of the RCRA units. An approved RCRA closure plan was agreed to by Whittaker Corporation and the California Department of Health Services (DHS) and the Environmental Protection Agency (EPA). The approved RCRA closure plan was received by Whittaker Corporation on December 28, 1987.

As directed by the approved RCRA Closure Plan, sampling and analysis of the building surfaces of RCRA units 223 and 236 and of the soils beneath the Lead Azide Area were required to verify the absence of hazardous wastes or hazardous constituents at these RCRA units. This verification sampling has been completed. In addition, the steel and concrete structures of the Lead Azide Area have been removed and properly disposed of as an alternative to extensive surface sampling of these structures.

The verification sampling procedures and results at these three RCRA units were detailed in an earlier report, "Verification Sampling at Selected RCRA Units", dated March 1988. that report is incorporated by reference into this Certification of Clean Closure report.

Tabular results from the "Verification Sampling at Selected RCRA Units" Report are included herein. The results verify that the three RCRA units, 223, 236 and Lead Azide Area, are free from hazardous waste and hazardous constituents and therefore can be clean closed.

II. PROCEDURES

The procedures for determining sampling locations, sampling protocol and analysis methods at the three RCRA units are specified in the approved Closure Plan. These procedures have been detailed in the "Verification Sampling at Selected RCRA Units" report.

Wipe samples of the inside building surfaces were obtained from buildings 223 and 236. In accordance with the Closure Plan, the soils at the Lead Azide Area were sampled at three (3) locations. Soil samples were collected at the location of the loading/unloading area and tanks C and D. These two tanks are down slope from tanks A and B and building 207 (See Figure 1). Soil samples from 0-6" and 6-12" from the ground surface were obtained in brass 2" x 6" sleeves.

Chain of custody documentation was kept for all samples. These documents are contained in the "Verification Sampling at Selected RCRA Units" report.

III. REMEDIAL ACTION

The only remedial action undertaken at the three RCRA Units was to demolish and dispose of the steel tanks and concrete containment structures that existed at the Lead Azide Area. This option was chosen (in accordance with the Closure Plan) as an alternative to extensive sampling of these structures. It was necessary to remove the structures to enable soil sampling beneath the structures. Prior to removal, the steel tanks and concrete containment structures were inspected for cracks, ruptures or other noticeable signs of spillage or leakage. There were no cracks, ruptures or signs of spillage or leakage.

The structures were hauled away and disposed of as hazardous waste. The uniform hazardous waste manifests for this disposal are included as Appendix A.

After removal of the structures at the Lead Azide Area the surface soils were inspected for noticeable staining or discoloration. No soil staining or discoloration was observed.

IV. VERIFICATION SAMPLING RESULTS

The results of the verification sampling analysis were presented in the "Verification Sampling at Selected RCRA Units" report and are presented in Tables 1 and 2, corresponding to verification sampling at the Lead Azide Area and buildings 223 and 236 respectively.

Six samples were collected in the soils beneath the former tanks/containment structures at the Lead Azide Area. Two samples were collected beneath the former loading/unloading area and the remaining four samples were collected beneath tanks C and D. No lead was detectable in all six samples. Statistical analysis of these results, in accordance with the approved Closure Plan, indicate that there is no statistical difference in the lead concentration of the soils at the Lead Azide Area and the Bermite, background soils lead concentration.

Wipe samples of the inside building surfaces at RCRA units 223 and 236 were analyzed for the organic compounds dibutyl phthalate and diphenylamine and for the metals lead, magnesium and boron. Background wipe samples, collected from the metal roof of building 502 are used for comparison of the metal wipe samples at buildings 223 and 236 in accordance with the Closure Plan. An additional background wipe sample for metals was collected at the time of sampling of buildings 223 and 236. This sample was collected on the roof of one of the abandoned office buildings at Bermite, again in accordance with the Closure Plan. In addition, a field blank wipe sample for metals was collected at building 223.

No organic compounds were detected in the wipe samples analyzed. A background wipe sample for organics was collected but not analyzed.

Boron was not detected in the wipe samples from the two buildings and was not detected in the background wipe samples.
Lead was detected in the background wipe samples from building 502 and was detected at approximately the same level at building 236. No lead was detected in the wipe samples from building 223.

Magnesium was not detected in the background wipe samples from building 502 but was detected from the 223 background sample. Magnesium was detected in the wipe samples from both buildings 223 and 236 at similar levels. The field blank sample collected at building 223 also had detectable magnesium. The detection of magnesium at these two buildings is not surprising, as magnesium is present at very high background concentrations in the soils at the Bermite facility. The average background concentration of magnesium in the soils at the Bermite facility was determined to be 1536 mg/kg (Verification Sampling Results at Selected RCRA Units", dated March 1988). The two buildings 223 and 236 had been abandoned for over a year, were open to the elements and were coated with dust, soil, and animal droppings.

TABLE 1

LEAD CONCENTRATIONS AT LEAD AZIDE AREA
0 - 1 FEET

Sample I.D.	Concentration, ppm
207-1, 0-0.5'	<4
207-2, 0-5-1.0'	<4
207-3, 0.0-0.5'	<4
207-4, 0.5-1.0'	<4
207.5, 0.0-0.5'	<4
207.6, 0.5-1.0'	<4
Detection Limit	4
Average Concentration	4
Upper Confidence Limit	4
Lower Confidence Limit	4
Standard Deviation	0
Variance	0
Coefficient of Variation	--
Background Average	3.7
Background Variance	3.4
t*	0.8
t' .05 (one tailed test)	2.0

TABLE 2

WIPE SAMPLE RESULTS AT BUILDINGS 223 AND 236
METAL AND ORGANIC RESULTS

Background Metal Wipe Samples

Sample I.D.	Lead mg/ft^2	Magnesium mg/ft^2	Boron mg/ft^2
502-5	0.03	ND	ND
502-6	0.01	ND	ND
Detection Limits	0.003	0.01	0.005
223-1	ND	0.4	ND
Detection Limits	0.01	0.05	0.01

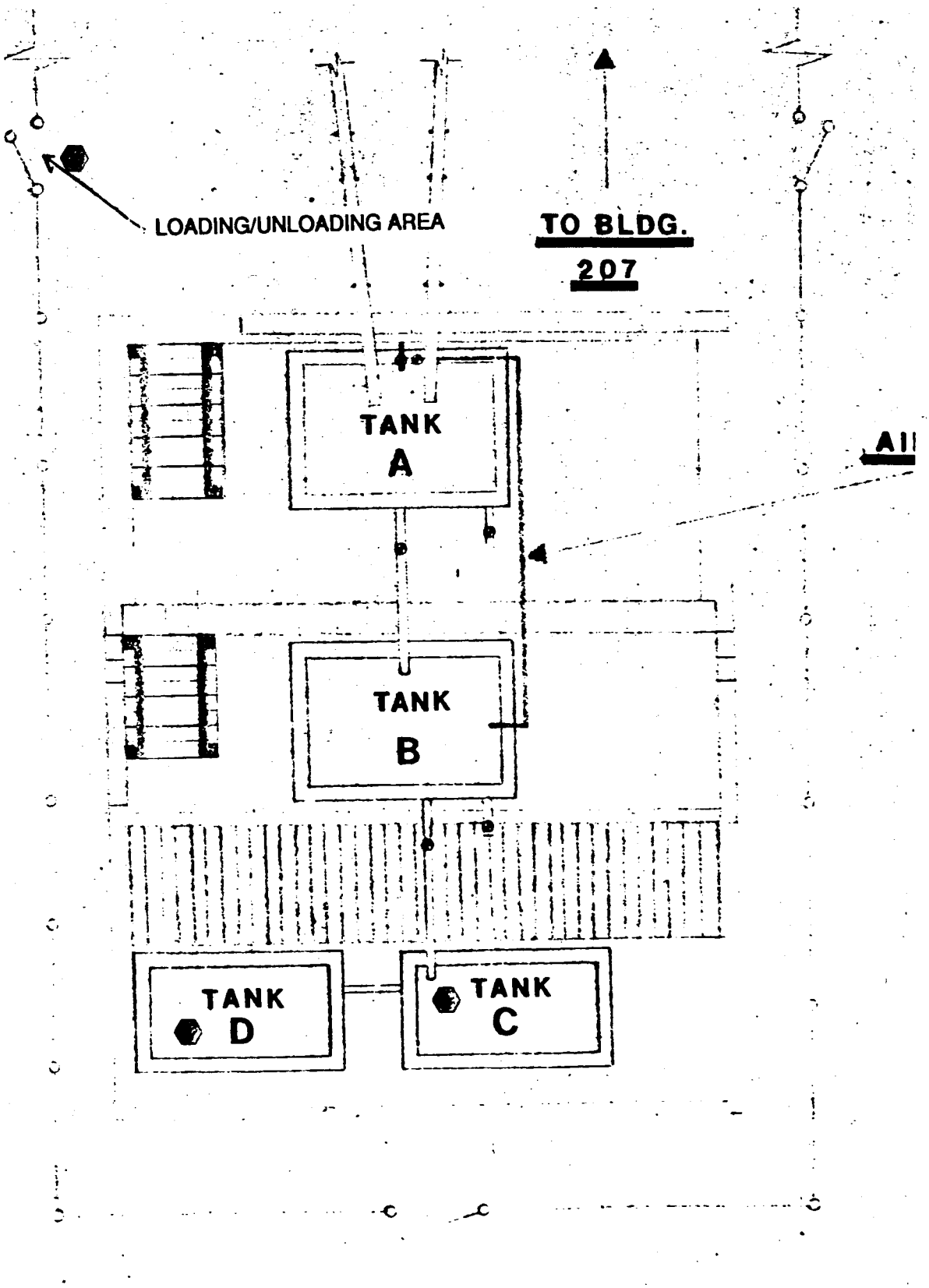
Metal Results

223-2 Building 223 (floor)	ND	.1	ND
223-3 Building 223 (corner)	ND	.1	ND
223-4 Building 223 (blank)	ND	.1	ND
236-2 Building 236 (floor)	0.05	0.8	ND
Detection Limits	0.01	0.05	0.01

Organic Results

Sample I.D.	Location	Dibutyl Phthalate (mg/ft^2)	Diphenylamine (mg/ft^2)
223-6	Building 223 (floor)	ND	ND
236-1	Building 236 (corner)	ND	ND
Detection Limits		10	0.1

ND - Not Detectable



● SOIL SAMPLE LOCATION

BERMITE DIVISION, WHITTAKER CORPORATION	Consulting Engineers	OCT 1989
Lead Azide Area	Wenck Associates, Inc. Twelve Oaks Center 15500 Wayzata Blvd. Wayzata, MN 55391	Fig. 1

APPENDIX A

HAZARDOUS WASTE MANIFESTS

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-88)
Please print or type. (Form designed for use on elite 12-pitch typewriter).

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD064573108 Manifest Document No. 11167

2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
BERMITE DIV. OF WHITTAKER CORP.
22116 W. SOLEDAD CYN. RD. SAUGUS, CA. 91350

4. Generator's Phone (805) 259-2241

A. State Manifest Document Number 87204234

B. State Generator's ID CAHQ3610065504

5. Transporter 1 Company Name: C.E. ZIMMERMAN
6. US EPA ID Number: CAD980671634
C. State Transporter's ID 805801
D. Transporter's Phone (805) 251-1697

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
CASMALIA RESOURCES
NTU ROAD
CASMALIA, CA. 93429
10. US EPA ID Number: CAD020748125
G. State Facility's ID CAD020748125
H. Facility's Phone (805) 937-8449

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. HAZARDOUS WASTE SOLID, N.O.S. ORM-E NA9189 (LEAD)	0101	DT	01915	Y	State 611 EPA/Other 8008
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

GENERATOR COPY
Return To Generator

J. Additional Descriptions for Materials Listed Above
SOIL CONTAMINATED WITH LEAD

K. Handling Codes for Wastes Listed Above
a. 03 b.
c. d.

15. Special Handling Instructions and Additional Information
PROTECTIVE CLOTHING, GLOVES, GOGGLES

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: TIM BRICKER
Signature:
Month Day Year: 11 16 87

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: CHARLES E ZIMMERMAN
Signature:
Month Day Year: 11 16 87

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Casmalia Resources 4,950 lbs
Signature: Connis Fraley
Month Day Year: 11 16 87

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

GENERATOR | TRANSPORTER | FACILITY

DHS 8022 A (1/87)
EPA 6700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY THAT THE FOLLOWING DESCRIBED COMMODITY WAS WEIGHED, MEASURED, OR COUNTED BY A WEIGHMASTER, WHOSE SIGNATURE IS ON THIS CERTIFICATE, WHO IS A RECOGNIZED AUTHORITY OF ACCURACY, AS PRESCRIBED BY CHAPTER 7 (COMMENCING WITH SECTION 12700) OF DIVISION 5 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE, ADMINISTERED BY THE DIVISION OF MEASUREMENT STANDARDS OF THE CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE.

WEIGHED AT: N.T.U. ROAD, CASMALIA, CA.

WEIGHT IN POUNDS:

73780 lb GROSS
pt 32280 lb TARE
41500 lb NET

11:30AM 11-16-87

BY: CASMALIA RESOURCES WEIGHMASTER

DEPUTY Dennis Fraley DRIVER [signature] Zimmerman CLASS I5 SPR CC

☐ HAZARDOUS ☐ NON-HAZARDOUS

CASMALIA RESOURCES

P.O. BOX 5275 • SANTA BARBARA, CA 93150 • PHONE (805) 000-0007

98424

GENERATOR Bermite Div of Whittaker Corp

TRANSPORTER Zimmerman

TRUCK LIC. #S 1007983 10

BILLED TO Generator

TRAILER LIC. #S X W4113

POINT OF ORIGIN Saugus Ca

APPOINTMENT NUMBER

WASHOUT: YES ____ NO X

MANIFEST # 87204234

FOR OFFICE USE ONLY

1. ____ @ ____ ____
2. ____ @ ____ ____
3. ____ ____
4. WASHOUT ____ ____
5. Hazardous Waste Fee ____ TONS @ ____ ____
6. SUPERFUND ____ ____
7. S. B. COUNTY TAX ____ ____

TOTAL $

State of California — Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-88)
Please print or type. (Form designed for use on elite 12-pitch typewriter).

#31

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD064573108 Manifest Document No. 111137

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
BERMITE DIV. OF WHITTAKER CORP.
22116 W. SOLEDAD CYN. RD. SAUGUS, CA. 91350

4. Generator's Phone (805) 259-2241

A. State Manifest Document Number: 87204233

B. State Generator's ID: HAHG3609650 4

5. Transporter 1 Company Name: C.E. ZIMMERMAN

6. US EPA ID Number: CA0989674634

C. State Transporter's ID: 805807

D. Transporter's Phone: (805) 251-1691

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CASMALIA RESOURCES
NTU ROAD
CASMALIA, CA. 93429

10. US EPA ID Number: CAD020748125

G. State Facility's ID

H. Facility's Phone: (805) 937-8449

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. HAZARDOUS WASTE SOLID, N.O.S. ORM-E NA 9189 (LEAD)	001	DT	00015	Y	State 611 / EPA/Other 0008
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

GENERATOR COPY
Return To Generator

J. Additional Descriptions for Materials Listed Above
CONCRETE & SOIL CONTAMINATED WITH LEAD.

K. Handling Codes for Wastes Listed Above
a. b. c. d.

15. Special Handling Instructions and Additional Information
PROTECTIVE CLOTHING, GLOVES, GOGGLES

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
TIM BRICKER	Tim Bricker	11	13	87

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
CHARLES E. ZIMMERMAN	Charles E. Zimmerman	11	13	87

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Casmalia Resources 98378 38,940lbs	Dennis Fraley	11	13	87

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

GENERATOR

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

WEIGHMASTER CERTIFICATE

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WEIGHED AT: N.T.U. ROAD, CASMALIA, CA.

WEIGHT IN POUNDS:

71,220 lbs Gross
32,280 lbs Tare
38,940 lbs Net

11-13-87 12:02P

BY: CASMALIA RESOURCES WEIGHMASTER

DEPUTY Richard J Payne DRIVER [signature] CLASS 15 SPR CB

☒ HAZARDOUS ☐ NON-HAZARDOUS

CASMALIA RESOURCES 98378

P.O. BOX 5275 • SANTA BARBARA, CA 93150 • PHONE (805) 968-0887

GENERATOR Bermite

TRANSPORTER Zimmerman

BILLED TO "

POINT OF ORIGIN Saugus CA

WASHOUT: YES ____ NO ✓

MANIFEST # 87204233

TRUCK LIC. #'S 1M498

TRAILER LIC. #'S XW7113

APPOINTMENT NUMBER ____

FOR OFFICE USE ONLY

1. ____ ● ____ ____
2. ____ ● ____ ____
3. ____ ____
4. WASHOUT ____ ____
5. Hazardous Waste Fee
   ____ TONS @ ____ ____
6. SUPERFUND ____ ____
7. S. B. COUNTY TAX ____

TOTAL $

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-88)
Please print or type. (Form designed for use on elite (12-pitch) typewriter).

#38

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CAD064573108
Manifest Document No.: 11127
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number: 87204246

3. Generator's Name and Mailing Address: BERMITE DIV. OF WHITTAKER CORP. 22116 W. SOLEDAD CYN. RD. SAUGUS CA. 91350
4. Generator's Phone (805) 759-2741
B. State Generator's ID: HAHQ36100650014

5. Transporter 1 Company Name: C.E. ZIMMERMAN
6. US EPA ID Number: CAD981674634
C. State Transporter's ID: 805801
D. Transporter's Phone: (805) 251-1691

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address: CASMALIA RESOURCES NTU ROAD CASMALIA, CA. 93429
10. US EPA ID Number: CAD020748125
G. State Facility's ID: CAD020748125
H. Facility's Phone: (805) 937-8449

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. HAZARDOUS WASTE SOLID, N.O.S. ORM-E NA 9189 (LEAD)	001	DT	00015	Y	State 611 / EPA/Other D008
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

GENERATOR COPY
Return To Generator

J. Additional Descriptions for Materials Listed Above: CONCRETE, WOOD, + SOIL CONTAMINATED WITH LEAD.

K. Handling Codes for Wastes Listed Above: a. 03 b. c. d.

15. Special Handling Instructions and Additional Information: WEAR PROTECTIVE CLOTHING, GLOVES, GOGGLES.

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
TIM BRICKER	[signature]	11 12 87

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
CHARLES E. ZIMMERMAN	Charles E. Zimmerman	11 12 87

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Casmalia Resources #98330 - 35,640 lbs	Dennis Fraley Dennis Fraley	11 12 87

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

GENERATOR / TRANSPORTER / FACILITY

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

WEIGHMASTER CERTIFICATE

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WEIGHED AT: **N.T.U. ROAD, CASMALIA, CA.**

WEIGHT IN POUNDS:

67880 lb GROSS
32280 lb TARE
35600 lb NET

7:43AM 11-12-87

CASMALIA RESOURCES

P.O. BOX 5275 • SANTA BARBARA, CA 93150 • PHONE (805) 969-5897

98330

GENERATOR Bermite Div of Whittaker Corp

TRANSPORTER Zimmerman

BILLED TO Morton

POINT OF ORIGIN Saugus Ca

WASHOUT: YES ____ NO X

MANIFEST # E 7204246

TRUCK LIC. #'S 10798

TRAILER LIC. #'S X W7173

APPOINTMENT NUMBER

FOR OFFICE USE ONLY

1. ____ • ____ ____
2. ____ • ____ ____
3. ____ ____
4. WASHOUT ____ ____
5. Hazardous Waste Fee ____ TONS @ ____ ____
6. SUPERFUND ____ ____
7. S. B. COUNTY TAX ____

TOTAL $

BY: CASMALIA RESOURCES WEIGHMASTER

DEPUTY Dennis Fraley DRIVER Charles Zimmerman CLASS I-S SPR CG

☒ HAZARDOUS ☐ NON-HAZARDOUS

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-88)
Please print or type. (Form designed for use on elite (12-pitch) typewriter).

#33

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD064573108 Manifest Document No.
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
BERMITE DIV. OF WHITTAKER CORP.
22116 W. SOLEDAD CYN RD. SAUGUS, CA. 91350
4. Generator's Phone (805) 259-2241

A. State Manifest Document Number 87204232
B. State Generator's ID HAHQ36006594

5. Transporter 1 Company Name C. E. ZIMMERMAN
6. US EPA ID Number CAD980674634
C. State Transporter's ID 80580
D. Transporter's Phone (805) 251-1691

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
CASMALIA RESOURCES
NTU ROAD
CASMALIA, CA. 93429
10. US EPA ID Number CAD020748125
G. State Facility's ID CAD020748125
H. Facility's Phone (805) 937-8449

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. HAZARDOUS WASTE SOLID, N.O.S. ORM-E NA 9189 (LEAD)	001	DT	00015	Y	State 611 EPA/Other D008
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

GENERATOR COPY
Return To Generator

J. Additional Descriptions for Materials Listed Above
CONCRETE, WOOD, + SOIL CONTAMINATED WITH LEAD.

K. Handling Codes for Wastes Listed Above
a. 03
b.
c.
d.

15. Special Handling Instructions and Additional Information
WEAR PROTECTIVE CLOTHING, GLOVES, GOGGLES

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: TIM BRICKER | Signature: Tim Bricker | Month Day Year: 1 11 87

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Charles E. ZIMMERMAN | Signature: Charles E. Zimmerman | Month Day Year: 1 11 87

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: | Signature: | Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Casmalia Resources #98299 - 40,880 lbs | Signature: Dennis Fraley Dennis Fraley | Month Day Year: 1 11 87

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

GENERATOR / TRANSPORTER / FACILITY

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

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WEIGHED AT: N.T.U. ROAD, CASMALIA, CA.

WEIGHT IN POUNDS:

73160 lbs Gr.
Wt 32280 lbs tare
40880 lbs Net

11-11-87 1:15 pm

BY: CASMALIA RESOURCES WEIGHMASTER

DEPUTY Dennis Fraley DRIVER Rodney Zimmerman CLASS E-5 SPR CG

☐ HAZARDOUS ☐ NON-HAZARDOUS

CASMALIA RESOURCES

P.O. BOX 5275 • SANTA BARBARA, CA 93150 • PHONE (805) 968-0887

98279

GENERATOR Bermite

TRANSPORTER C E Zimmerman TRUCK LIC. #'S 1M7[illegible]6

BILLED TO Martin TRAILER LIC. #'S XW 7113

POINT OF ORIGIN Sunol Ca APPOINTMENT NUMBER

WASHOUT: YES ____ NO X

MANIFEST # 87dcu232

FOR OFFICE USE ONLY

1. ____ ● ____ ____
2. ____ ● ____ ____
3. ____ ____
4. WASHOUT ____ ____
5. Hazardous Waste Fee ____ TONS @ ____ ____
6. SUPERFUND ____ ____
7. S. B. COUNTY TAX ____

TOTAL $

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-88)
Please print or type. (Form designed for use on 12-pitch typewriter).

#T5J

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CAD064573108 | Manifest Document No.: 7

2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
BERMITE DIV. OF WHITTAKER CORP.
32116 W. SOLEDAD CYN. RD. SAUGUS, CA. 91350

4. Generator's Phone (805) 259-7741

A. State Manifest Document Number: 87204493

B. State Generator's ID: CAH936006504

5. Transporter 1 Company Name: C.E. ZIMMERMAN INC. | 6. US EPA ID Number: CAD981674634

C. State Transporter's ID: 805801

D. Transporter's Phone: (805) 251-1691

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CASMALIA RESOURCES
NTU ROAD
CASMALIA, CA. 93429 | 10. US EPA ID Number: CAD020748175

G. State Facility's ID: CAD020748175 DS

H. Facility's Phone: (805) 937-8449

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. HAZARDOUS WASTE SOLID, N.O.S. ORM-E NA 9189 (LEAD)	001	DT	00015	Y	State 611 / EPA/Other 0008
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

GENERATOR COPY
Return To Generator

J. Additional Descriptions for Materials Listed Above
EMPTY CRUSHED TANKS, CONCRETE, WOOD & SOIL CONTAMINATED WITH LEAD.

K. Handling Codes for Wastes Listed Above
a. 07 | b. | c. | d.

15. Special Handling Instructions and Additional Information
WEAR PROTECTIVE CLOTHING, GLOVES GOGGLES.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
TIM BRICKER		1/1/1987

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Charles E Zimmerman	Charles E Zimmerman	1/11/1987

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Casmalia Resources #98229-34, Hay	Dennis Fraley	1/11/87

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

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WEIGHED AT: N.T.U. ROAD, CASMALIA, CA.

WEIGHT IN POUNDS:

66680 lb GROSS 2:02PM
32280 lb TARE
34400 lb NET

71 INBOUND
66680 lb 11-10-87 1:12PM

BY: CASMALIA RESOURCES WEIGHMASTER

DEPUTY Dennis Fraley DRIVER Charles Zimmerman CLASS I SPR CG

☒ HAZARDOUS ☐ NON-HAZARDOUS

CASMALIA RESOURCES
P.O. BOX 5275 • SANTA BARBARA, CA 93150 • PHONE (805) 969-5697

98229

GENERATOR Burmite

TRANSPORTER Zimmerman

TRUCK LIC. #S 1M798

BILLED TO ~~Generator~~ Martin Engineering

TRAILER LIC. #S XW7113

POINT OF ORIGIN Saugus Ca

APPOINTMENT NUMBER 55

WASHOUT: YES ____ NO X

MANIFEST # 87204493

FOR OFFICE USE ONLY

1. ____ @ ____ ____
2. ____ @ ____ ____
3. ____ ____
4. WASHOUT ____ ____
5. Hazardous Waste Fee ____ TONS @ ____ ____
6. SUPERFUND ____ ____
7. S. B. COUNTY TAX ____ ____

TOTAL $

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-88)
Please print or type (Form designed for use on elite (12-pitch typewriter).

#15

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CAD064573108 | Manifest Document No.: 11697
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number: 87204494

3. Generator's Name and Mailing Address:
GERMITE DIV. OF WHITTAKER CORP.
22116 W. SOLEDAD CYN. RD. SAUGUS, CA. 91350

4. Generator's Phone (805) 259-2241

B. State Generator's ID: 1HAHQ36100615014

5. Transporter 1 Company Name: C. E. ZIMMERMAN INC.
6. US EPA ID Number: CAD980674634
C. State Transporter's ID: 805801
D. Transporter's Phone: (805) 251-1691

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address:
CASMALIA RESOURCES
NTU ROAD
CASMALIA, CA. 93429

10. US EPA ID Number: CAD020748125
G. State Facility's ID: CAD020748125
H. Facility's Phone: 805 937-8449

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. HAZARDOUS WASTE SOLID N.O.S. ORM-E NA 9189 (LEAD)	001	DT	00015	Y	State 611 EPA/Other D008
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

GENERATOR COPY
Return To Generator

J. Additional Descriptions for Materials Listed Above
EMPTY CRUSHED TANKS, CONCRETE, WOOD, AND SOIL CONTAMINATED WITH LEAD.

K. Handling Codes for Wastes Listed Above
a. 03
b.
c.
d.

15. Special Handling Instructions and Additional Information
WEAR PROTECTIVE CLOTHING, GLOVES, GOGGLES.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month	Day	Year
TIM BRICKER	[signature]	11	10	87

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
CHARLES E ZIMMERMAN	Charles E Zimmerman	11	10	87

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Casmalia Resources	Judy M. Blaine	11	19	87

GENERATOR / TRANSPORTER / FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

DHS 8022 A (1/87)
EPA 8700—22
(Rev. 9-86) Previous editions are obsolete.

30,680 lbs

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WASHOUT: YES ____ NO ____

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1. ____ @ ____ ____
2. ____ @ ____ ____
3. 1 pl. Glass 3.00
4. WASHOUT ____ ____
5. Hazardous Waste Fee ____ TONS @ ____ ____
6. SUPERFUND ____ ____
7. S. B. COUNTY TAX ____ ____

TOTAL $

Al Simmons — wironmental - Safety Consultant — Fax - (214) 783-2433
P.O. Box 708 Richardson, Texas 75080 Office - (214) 783-0533

April 8, 1989

Mr. Alan Sorsher
State of California, Health and Welfare Agency
Department of Health Services
Toxic Substances Control Program
1405 N. San Fernando Boulevard, Suite 300
Burbank, California 91504

Re: DHS Letter (Dated March 30, 1990) to A. L. Simmons, Whittaker Corporation, Regarding Bermite Division - CA EPA ID #CAD 064573108

Dear Mr. Sorsher:

We wish to thank you and members of the DHS staff for taking time to meet with us regarding your referenced letter. This letter and attachment summarizes our understanding of the tentative conclusions of our meeting held on April 4, 1990 at your offices.

As discussed at the meeting, Whittaker is committed to continue the facility closure and investigation and strongly objects to the need for a consent agreement to continue the present process.

We are completing a Hydrogeologic Assessment which is scheduled to be finalized within approximately three weeks. We are still gathering information for this study, i.e., oil well data.

We will then prepare a Work Plan for Phase I for the soil characterization activities requested in your March 30, 1990 letter. We expect to submit this Work Plan I within approximately three weeks after submittal of the Hydrogeologic Assessment.

The other aspects of our response to your letter are covered in Attachment 1 to this letter.

We are available to discuss this matter with you and look forward to continued cooperation and progress on this project.

Sincerely,

A. L. Simmons

cc: Mr. Anastacio Medina, L.A. County Hazardous Waste Program

Mr. Andrew Hollbrook, RWQCB, Los Angeles

Mr. David W. Hogan, Asst. Planner, City of Santa Clarita

Mr. Tom Kelly, U.S. EPA, Region IX, San Francisco

Ms. Lucille Van Omerring, Financial Responsibility Unit, Toxic Substances Control Program, Sacramento

Mr. P.C. Peterson, Office of Legal Services, Toxic Substances Control Program, Sacramento

Mr. Gordon Louttit, V.P., Whittaker Corporation, L. A.

Mr. Glen AbdunNur, Bermite Division, Whittaker Corporation, Santa Clarita

Mr. Norman Wenck, Wenck Associates, Minnesota

ALS/ss
Attachment

ATTACHMENT 1

SUMMARY OF TENTATIVE CONCLUSIONS OF DHS/WHITTAKER MEETING ON APRIL 5, 1990 REGARDING DHS LETTER DATED MARCH 30, 1990 TO WHITTAKER

Listed below are the ITEMS - - SUBJECTS - - TENTATIVE CONCLUSIONS:

Cover Letter - - Consent Agreement is not required - - DHS to consider.

Cover Letter - - Cost estimate - - To be submitted (TBS) in Phase I (Work Plan I).

Cover Letter - - Update financial assurance - - TBS by Whittaker.

Page 1, Para. I, 1 - - Additional vertical and lateral soil characterization of 317 Area - - TBS after Hydrogeologic Assessment is completed.

Page 1, Para. I, 2 - - Identification of semi-volatiles at 317 Area - - Alan Sorsher to check laboratory procedure, Whittaker to identify compounds, TBS.

Page 1, Para. I, 3 - - Additional statistical Analysis of metals at 342 Area - - TBS.

Page 2, Para. I, 4 - - Appendix VIII, Sampling location discussion - - TBS.

Page 2, Para. I, 5 - - Pilot testing work plan and performance of pilot testing - - Whittaker will submit plan. Propose to remediate when SCAQMD permit is received and equipment is available. Will deactivate system to allow stabilization when additional probe measurements are made.

Page 2, Para. II, 1, 2, 3 - - Additional statistical analysis on Burn Area data - - TBS.

Page 2, Para. II, 4 - - Modified Health Risk Assessment, as necessary - - If necessary this document will be prepared subsequent to the submittal of the Work Plan I.

Page 3, Para. III, 1 - - Two additional downgradient wells at 342 Area - - Whittaker will construct an upgradient well at 342 per Para. III, 4(d). Based on results, justification will be submitted for future activities.

Page 3, Para III, 2a, b, c - - Field sampling and labeling techniques - - Will comply beginning with Quarter 7 sample scheduled for week of April 9 or April 16, 1990.

Page 3, Para. III, 2d - - TOX detection limits - - Documentation will be submitted regarding TOX detection limits in Work Plan I.

Page 3, Para. III, 3 - - Notification of possible release - - Will be submitted week of April 9, 1990. Assessment Plan to be included in Work Plan I. The conductivity (EC) levels decreased in Quarters 5 and 6. 342 upgradient well to be used to determine if EC is elevated. Ion balance to be performed on W-2 sample during next event.

Page 3, Para. III, 3a, b - - Additional wells at 317 to define lateral and vertical - - A Phase II Work Plan (II) will be prepared and submitted following implementation of the additional probe Work Plan extent.

Page 3, Para. III, 4c - - Define facility stratigraphy - - When the study is complete.

Page 4, Para. III, 4d - - Determine cause of elevated EC during Quarter 7 sampling event – Determine ion balance of MW2 construct upgradient well. TBS.

Page 4, Para. IV, 1 - - Old lead azide - - Additional data to be provided, TBS.

Page 4, Para. IV, 2 - - Transfer sump at Building 110 - - Samples to be collected at 5 and 10 feet below surface at location of former sump and analyzed for titanium and chloride, TBS.

Page 4, Para. IV, 3a - - Ravine above 342 Area - - Research location and propose soil sampling plan, TBS.

Page 5, Para. IV, 3b - - Hula Bowl "oil changing station" - - Oil changing station was in bermed area, Soil Sampling Plan, TBS.

Page 5, Para. IV, 3c - - Soil Sampling Plan will be provided, TBS.

GENERAL -

The general sequence of events that are envisioned as a result of this meeting are as follows:

1. Submittal of Hydrogeologic Assessment
2. Submittal of Pilot Testing Work Plan
3. Submittal of Work Plan I for additional site soil characterization
4. Implementation of approved Pilot Testing
5. Implementation of approved Work Plan I
6. Submittal of Work Plan II for groundwater assessment
7. Implementation of approved Work Plan II
8. If necessary, submittal of Corrective Action Plan
9. If necessary, implementation of Approved Corrective Action Plan

Wenck Associates, Inc.

Consulting Engineers
(612) 475-0858
FAX – (612) 476-0504

August 31, 1989

Mr. Alan Sorsher
Department of Health Services
Toxic Substances Control Division III
1405 No. San Fernando Blvd., Suite 300
Burbank, CA 91504

Re: Monthly Progress Report No. 21
Implementation of Revised RCRA Closure Plan
Bermite Division, Whittaker Corporation
August 1989

Dear Mr. Sorsher:

The RCRA closure activities completed during the month of August included continued follow-up on NPDES and vapor extraction permits and EPA concurrence as to the nonhazardous nature of the treated groundwater from the 317 Area.

A draft NPDES permit for discharge of the treated water from the gradient control well system has been received and is under public notice. The permit application will be reviewed at the September 25, 1989 Board meeting. Mark Khal of the Los Angeles County Industrial Waste Department inspected the groundwater gradient control and treatment system on August 30, 1989 and indicated the system was satisfactory. It is expected that the permit will be approved.

The air quality permit to construct and operate the vapor extraction system at the 317 Area is in the final stages of review at the South Coast Air Quality Management District (SCAQMD). Final approval is expected by September 1. In anticipation of receipt of approval, the necessary components of the vapor extraction system, including the activated carbon filters, were ordered and are being assembled.

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391-1418

Wenck Associates, Inc.

Consulting Engineers
(612) 475-0858
FAX – (612) 476-0504

We have received verbal concurrence from EPA Region IX that the pumped groundwater will not be regulated as hazardous waste once the water is treated to nondetectable levels of the volatile organic compounds of interest. Jan Palumbo of EPA requested that you draft a letter regarding this matter to be signed by both DHS and EPA.

If you have any questions regarding this report or the closure activities at Bermite, please do not hesitate to call Norm Wenck or me at (612) 475-0858.

Respectfully submitted,

WENCK ASSOCIATES, INC.

Christopher F. Thompson, P.E.

CFT/aec

cc: Al Simmons, Whittaker
Glen Abdun Nur, Bermite
Marsha Croninger, Jones, Day, Reavis & Pogue
Jan Palumbo, EPA Region IX
Jim Ross, RWQCB

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391-1418

STATUS REPORT
of
CLOSURE OVERSIGHT
for

WHITTAKER CORPORATION, BERMITE DIVISION
22116 West Soledad Canyon Road, Saugus, California
EPA ID NUMBER CAD 064573108

Prepared by:

California Department of Health Services
Toxic Substances Control Division
Region 3 - Burbank

JULY 1989

A. Introduction

This status report for the closure of the Whittaker-Bermite facility identifies the activities conducted, submittals by the facility and decisions made between October 1, 1988 and June 30, 1989. Facility background information is provided to place current activities in proper perspective, and the rationale for projected activities are also explained in detail.

B. Facility Background and History:

The Bermite Division of the Whittaker Corporation (Bermite) is located at 22116 West Soledad Canyon Road in Saugus, California. The EPA ID number for this facility is CAD 064573108.

DHS/EPA reviewed and modified the deficient interim status closure plans submitted by the facility. The modified closure plan was approved by EPA and DHS on 9/30/87 and modified again on 12/27/87. (A copy of the closure chronology is attached.) The parent corporation hopes to either sell the property for residential/-commercial development or develop the property themselves. Because of the future development, the company has been very anxious to complete implementation of the closure plan (despite the technical difficulties described below) and is attempting to achieve clean closure by remediation of residual contamination.

The facility occupies approximately 1100 acres (see attached maps) and has been used for ordnance, flares and explosives manufacturing since the early 1900s. Production ceased entirely in early 1987. The terrain consists of hills and valleys, mostly unimproved areas. Near the surface impoundments, the uppermost aquifer appears to be confined beneath a clay or shale aquiclude located beneath approximately 600 feet of very permeable alluvial formations. The thickness of this alluvial formation and the large cobbles and boulders within it have made drilling and installation of groundwater monitoring wells, vapor probes and groundwater sampling extremely difficult and technically challenging for the facility.

RCRA units included 8 storage units (6 portable, 2 stationary) for dry waste (contaminated paper towels, gloves, and waste explosives and flares); treatment tanks for lead azide wash solution; 5 thermal treatment units (burn pits, burn cage, pans, rails, and detonation range); and two synthetic lined surface impoundments (one for organic solvents and one for aqueous waste water). A RCRA Facility Assessment (RFA) report was prepared by Science Applications International Corporation in the fall of 1987, but the need for a RCRA Facility Investigation has not been determined. A groundwater monitoring system had not been installed until late 1988.

During the summer of 1987, solvent vapors were found in the soil underlying the site of the former solvent surface impoundment (317). This unit had been removed in 1983 without an approved closure plan.

The DHS/EPA approved closure plan called for characterization and remediation of the soil contamination, installation of a groundwater monitoring system and a monitoring program capable of verifying the absence of groundwater contamination from both impoundments.

C. Submittals and activities scheduled for fiscal year 89 (Oct 1, 1988 through Sept. 30, 1989)

Submitted on:

1. 12/22/88; Quarterly report for 10/88 groundwater monitoring. This report details the methods and protocol of groundwater sample collection and analysis and the resulting concentrations of all compounds analyzed.

2. 2/9/89; "Subsurface Vapor Probes at the 317 Area." This is a proposal for installing three nests containing 6 probes up to 120 feet deep.

3. 3/31/89; Quarterly report dated for 1/89 groundwater monitoring. This report details the methods and protocol of groundwater sample collection and analysis and the resulting concentrations of all compounds analyzed.

4. 5/9/89; "Vapor Probe Construction and Measurements at the 317 Area." This is a report of the "as-built" construction during April 1988 of the vapor probes and vapor concentrations taken over the subsequent four week period.

5. Letter dated May 19, 1989 reporting that the ground water samples obtained on April 17 - 19, 1989 showed organic solvent contamination in well 4.

6. 6/7/89; "Interim Response Action Plan, 317 Area Soil and Groundwater Remediation." This proposal for interim remedial responses was prepared after ground water monitoring well 4 detected organic solvent contamination.

   The proposal describes a pilot vapor extraction and carbon absorption system, as anticipated in the approved closure plan, and a groundwater extraction well (gradient control well) to extract contaminated groundwater in the immediate vicinity of the former surface impoundment. The proposal also includes a carbon ground water treatment system using granular activated to remove organic contamination from the water.

7. 6/7/89; "Specific Plan, Groundwater Quality Assessment Program." This plan has been developed using information gained from the site activities and RCRA closure plan implementation and addresses the requirements of 40CFR 265.93(d)(3). The plan proposes two wells to be installed

about 100 feet downgradient from the area of greatest known soil vapor contamination. The facility understands that additional wells will likely be required to completely assess the contamination.

8. 6/21/89; "Application for Permit to Construct, and Operate, Vapor Extraction System with Activated Carbon Treatment Control." This application to the South Coast Air Quality Management District includes a narrative of the proposed extraction system's location, construction, and operation. It includes manufacturer's literature on the mechanical equipment required.

9. 6/27/89; revised RCRA Part A application which covers the organic vapor and groundwater cleanup equipment. This must be re-submitted to correct errors on the Part A.

10. 6/28/89; Updated closure cost estimate.

D. Submittals due

1. Closure cost estimate update.
2. Corrected Part A application.
3a. Quarterly groundwater monitoring reports.
3b. First groundwater quality assessment.
3c. Subsequent groundwater quality assessments.
4. Part B Post-Closure Permit application for long-term soil and groundwater cleanup.
5. Progress reports on the soil and groundwater assessments and cleanup.

E. Due dates for identified items

1. The closure cost estimate must be updated annually for inflation and reported to DHS each March. The cost estimate must also be updated whenever changes in the closure activities change the cost estimate.

2. The corrected Part A application will be submitted by July 15, 1989.

3a. The quarterly groundwater monitoring reports are expected on July 15 and September 22 for the April and July sampling events, respectively.

3b. The first determination under the groundwater quality assessment plan is due "as soon as technically feasible and within 15 days after that determination, submit to the Regional Administrator a written report containing an assessment of the ground-water quality." The facility's assessment plan will have to be revised to meet the requirements of 40 CFR 265.93(a)(1)-(3). It is anticipated

that first formal determination will be made by October 15, 1989. However, interim groundwater analysis reports will be furnished by the facility as each well is completed and analyzed.

3c. Under 40 CFR 265.93(d)(7)(i), the determination of groundwater quality must be made on a quarterly basis and reported to EPA annually by March 1, per 40 CFR 265.94(b).

4. The post-closure permit application will be due 60 days after it is called in. It is anticipated that the call-in letter will be transmitted by August 30.

5. The facility will submit weekly reports on the soil and groundwater assessment and cleanup progress.

F. Actions needed:

1. Facility needs to revise the Part A application and obtain permits for air and water discharges from pilot soil vapor and groundwater treatment units.

2. Facility needs to complete implementation of groundwater assessment plan and soil vapor characterization.

3. DHS/EPA need to send Part B post-closure permit call-in letter to facility by August 30, 1989.

4. DHS/EPA need to review RFA report and determine if an RFI is needed. In addition, the regulatory mechanism (permit or 3008(h) order) for requesting an RFI must be decided upon.

5. DHS needs to review sampling and analysis results submitted during 1988 and closure certifications for other HWM units (burn areas, lead azide treatment tanks, dry storage units).

G. Status report on submittals/activities and actions needed

Except for the surface impoundments, Bermite has performed removal and/or verification sampling and submitted sampling results and closure certifications for all of the RCRA-regulated units. Sampling results were submitted in March 1988 and closure certifications were submitted during March - June of 1988 for these units, but these documents have not yet been reviewed.

All of the recent work done by the facility were focused on soil contamination at the 317 unit and the groundwater monitoring program.

SOIL CONTAMINATION AROUND 317 SURFACE IMPOUNDMENT

The extent of lateral and vertical solvent vapor contamination in the subsoils has not been fully determined. Initially, pilot trenching as deep as 50' and field soil vapor analysis were used in an attempt to define the vertical and lateral extent of vapor contamination. This has been only partly successful. The approved closure plan also calls for the installation of vapor probes to characterize the extent of contamination. Seven vapor probe nests, as deep as 120 feet below the 50' level, were installed between March 8 and mid-May 1989. Testing of these probes showed vapor concentrations of approximately 200 - 500 ppmv at these depths, with higher levels at shallower depths. An attempt to install probes down to 240' using the air-rotary drilling method was not successful.

The facility has been working to limit the spread of soil and groundwater contamination. 120-foot deep vapor vents will be installed during July 1989 using the cable tool drilling method. DHS staff plans to observe this drilling technique. If this method is workable, it will be employed to install deeper probes to complete the soil characterization and for deeper vents, if necessary for the removal of solvent vapors.

As indicated in item C.8 above, on June 21, 1989, the facility applied to the South Coast Air Quality Management District for a permit to proceed with the soil vapor extraction and removal system. The first phase proposes two 120-foot deep vapor vents. Soil gases will be drawn from the vents through pipes and through a two-stage activated carbon filter. The filtered air will be drawn through a vacuum blower and then discharged. This equipment will be ready to start up within three weeks after completion of the first vent. Additional vents may be installed depending on the results of the first two.

GROUND WATER CONTAMINATION

Three rounds of quarterly groundwater sampling have occurred during October 1988, January 1989, and April 1989. DHS collected and analyzed samples from well 1 and well 4 and QA/QC samples during the January sampling event. 37 samples were analyzed by DHS for the most important contaminants at this site. The analyses were performed at the State DHS lab in Los Angeles and no contamination was detected.

On May 23, 1989, the facility reported to DHS that the April sampling of well 4 detected contamination by organic solvents. The initial sample found 4.8 mg/l of TCE, 14.3 ug/l of dichloroethylene, and 11.7 ug/l of tetrachloroethylene (Perc). The well was re-sampled, and the ground water was analyzed by a second lab which reported 7.2 mg/l TCE.

The facility was instructed to notify the Regional Water Quality Control Board of these findings, as well as the EPA Regional Administrator in accordance with 40 CFR 265.93. The facility was instructed to submit a specific plan for ground water quality

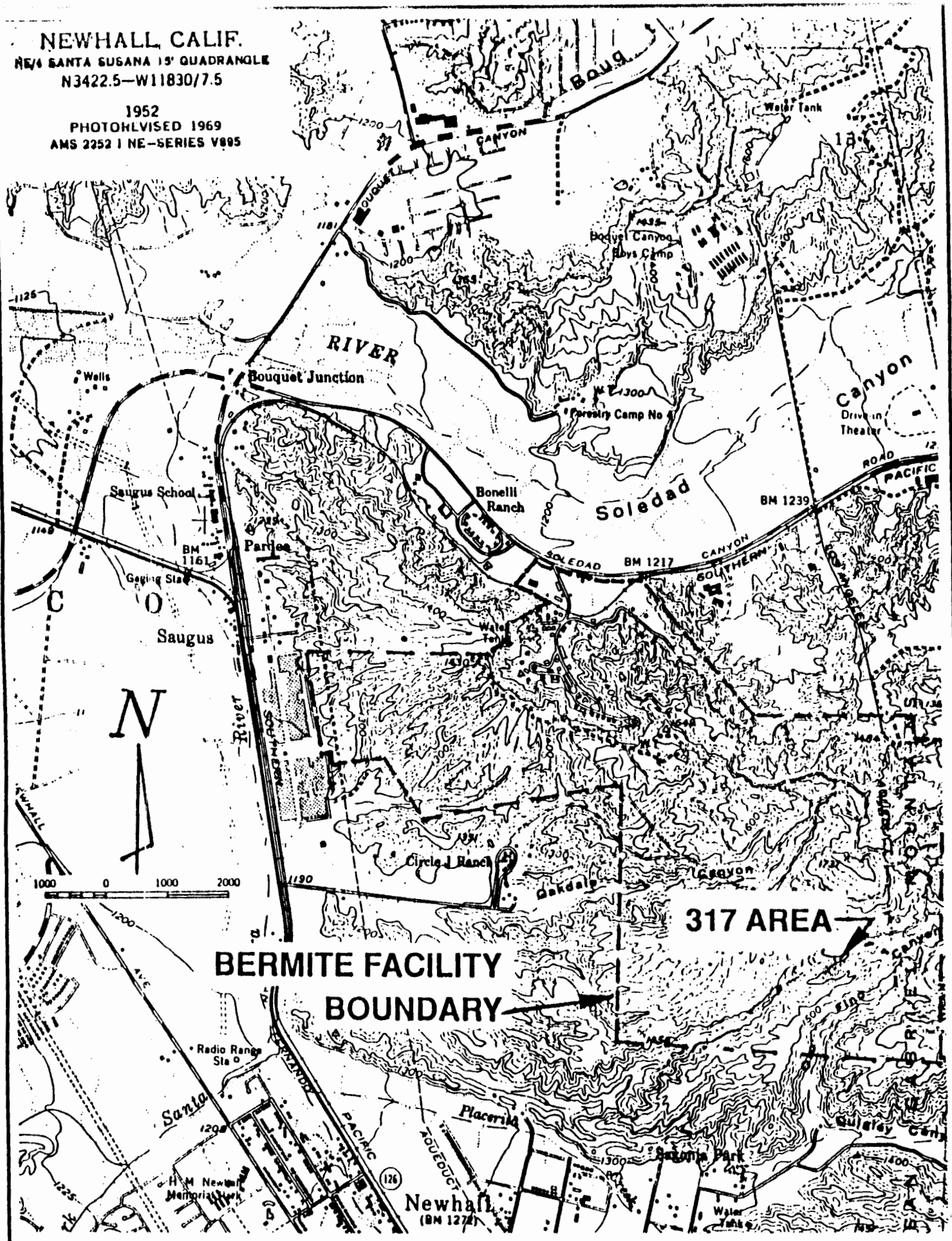
assessment. The facility was also instructed to notify the water supply companies in the area of the findings. Copies of the facility's letters to two water companies were sent to EPA and the DHS Public Water Supply Branch.

A follow-up meeting was held on 6/13/89 to discuss the facility's assessment plan and proposed pilot studies for a soil vapor extraction system and a ground water treatment system.

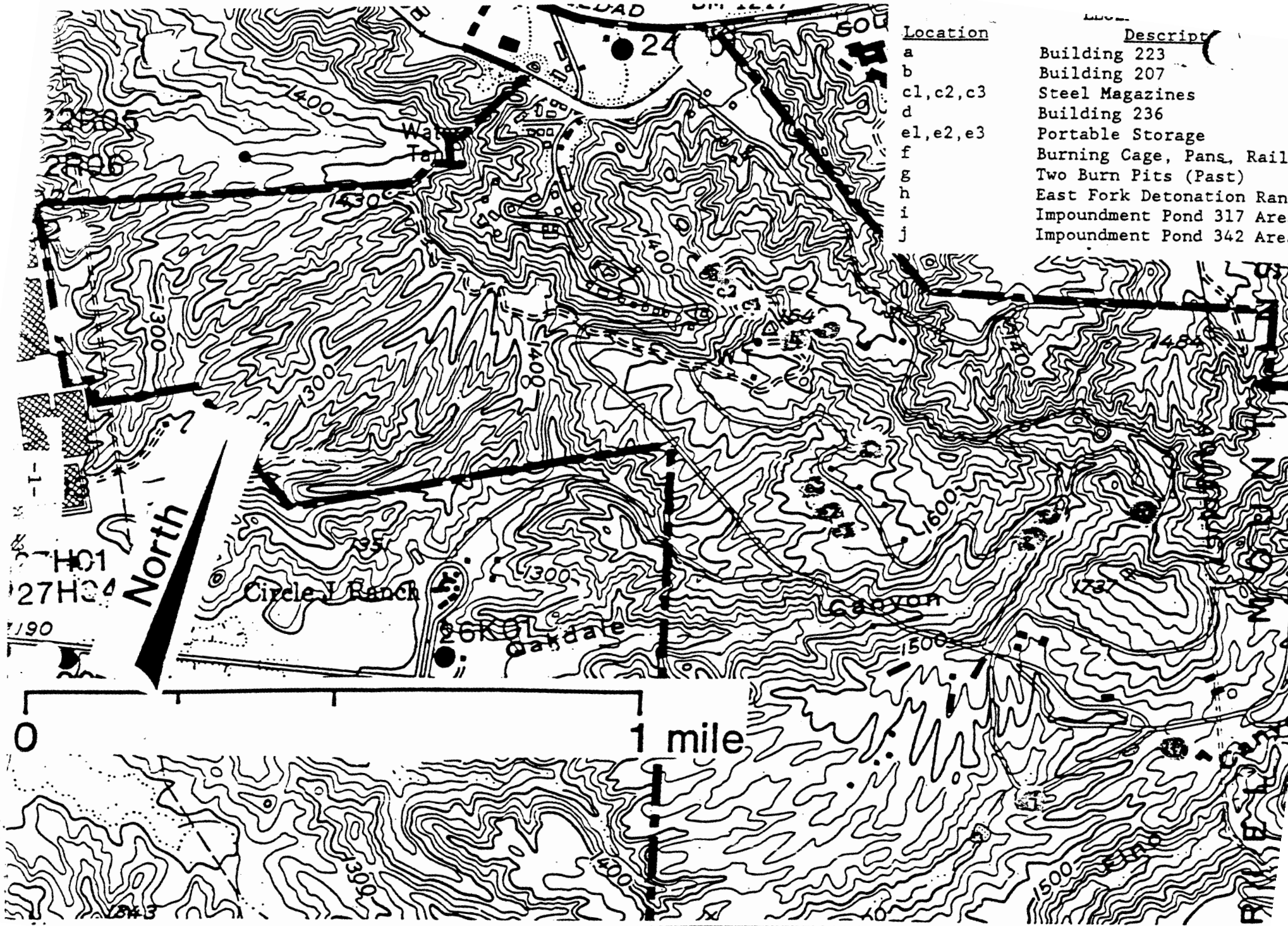
The facility is anxious to prevent the spread of groundwater contamination and has taken steps in that direction. The facility has installed an extraction well between the location of the former surface impoundment and well 4. They have pumped approximately 21,000 gallons of groundwater from this well in an attempt to halt or impede the spread of the plume. This water is being held in a portable tank until it can be treated in the proposed activated carbon filtration system, which is a separate system from that to be used for vapors from the soil. In addition to revising their Part A application to include the vapor and groundwater treatment units, the facility is pursuing discharge permits from the local sewerage agency and from the Regional Water Quality Control Board for the groundwater treated in this system.

In addition, the facility began drilling the first well called for in the assessment plan in late June and this well will be completed and developed by July 7, 1989.

In late June 1989, articles were published in three local newspapers on the groundwater contamination. Copies of the articles are attached.



BERMITE DIVISION - WHITTAKER CORPORATION	Consulting Engineers	JUN 1989
Site Plan	Wenck Associates, Inc. Twelve Oaks Center 15500 Wayzata Blvd. Wayzata, MN 55391	Fig. 1



Location	Description
a	Building 223
b	Building 207
c1,c2,c3	Steel Magazines
d	Building 236
e1,e2,e3	Portable Storage
f	Burning Cage, Pans, Rails
g	Two Burn Pits (Past)
h	East Fork Detonation Range
i	Impoundment Pond 317 Area
j	Impoundment Pond 342 Area

BERMITE DIVISION - WHITTAKER CORPORATION

Consulting Engineers

Twelve Oaks Center
15500 Wayzata Blvd.

CLOSURE CHRONOLOGY

WHITTAKER CORPORATION, BERMITE DIVISION
CAD 064 573 108

DATE	ITEM
March, 1983	Bermite removes two surface impoundments (units 317 & 342) without approved closure plan.
August 15, 1983 - November 30, 1983	Three letters from Bermite to DHS describing removal of impoundments and analysis of limited subsoil sampling.
October 28, 1985	DHS sends NOD on surface impoundment closures.
November 20, 1985	Letter from Bermite to DHS in response to above NOD.
April 28, 1986	Letter from DHS to EPA Enforcement re: inadequate closure of 317 impoundment
June - July, 1986	Bermite's consultant takes soil samples from site of former 317 impoundment. Sampling plan was not approved by EPA or DHS.
August 1, 1986	Consultant submits amended closure plan in anticipation of consent agreement with EPA.
August 19, 1986	Bermite submits sampling plan and results of June/July sampling at former 317 impoundment site.
August 26, 1986	EPA consent agreement signed requiring: submittal of closure plan; additional closure sampling at site of former #317 surface impoundment demonstrating compliance with 40 CFR 265.228; engineer's certification of closure for 317 & 342 impoundments and lead azide tank system.
October 22, 1986	Bermite's consultant takes soil samples from open burning areas despite the fact that the sampling plan was not approved by EPA or DHS.
February 4, 1987	DHS letter to EPA enforcement with comments on Bermite's closure confirmation sampling deficiencies at 317 impoundment submitted 8/19/86.

February 10, 1987	DHS sends NOD on 8/1/86 closure plan (other regulated units besides impoundments) to Bermite's consultant .
March 3, 1987	Letter from EPA to Bermite noting above deficiencies and requiring revised closure plan including soil characterization and hydrogeologic assessment of former surface impoundment sites and ground water monitoring.
May 6, 1987	DHS receives revised closure plan including workplan for characterization and hydrogeologic assessment at 317 and 342 sites.
June/July, 1987	Bermite begins executing above workplan at their risk, without workplan approval by DHS or EPA.
August 4, 1987	CEQA notice of exemption drafted.
August 7, 1987	Public notice of closure plan and public hearing published in Newhall Signal. Public notice period begins.
September 10,1987	Public hearing on closure plan held at local college. Public comment period closes.

L.A TIMES 6/29/89

GARY THORNHILL

Aerial view shows site of Bermite degreasing pool, now excavated to remove contaminated soil. State officials say pool was source of chemical that contaminated some area ground water, although drinking water apparently has not been tainted.

Pollution Found in Well at Bermite Plant Site

By HECTOR TOBAR, *Times Staff Writer*

A cancer-causing chemical leaking from the former site of the Bermite ordinance plant in Saugus has contaminated some ground water, but state officials said Wednesday that there is no evidence it has tainted drinking supplies.

The chemical, trichloroethylene, or TCE, was found in a test well on the Bermite property in April, said Alan Sorsher, associate engineer with the state Department of Health Services.

State officials said tests conducted by Wittaker Corp., which owns the property, found TCE at 7.2 parts per million, more than 1,000 times higher than the levels allowed by the state.

Sorsher said, however, that there was no evidence that TCE had contaminated drinking water at nearby wells. "We don't feel there is any cause for alarm at this point," he said. "We're continuing to assess the situation. We're just glad we caught it when we did."

The well closest to the Bermite site used for drinking water is operated by the Santa Clarita Water Company and is about a mile away, Sorsher said. Although the contamination will flow slowly in the direction of the public well, Sorsher said a Whittaker Corp. plan to remove the contaminated water and purify it should prevent the chemical from spreading to drinking supplies.

Bermite, a site for the production of military explosives since 1906, was closed in 1987 because of dwindling demands for the plant's products and the increasing value of Santa Clarita land. The source of the ground-water contamination was a pool that had been filled with industrial solvents used to degrease equipment. The pool was taken out of operation and emptied about six years ago, Sorsher said.

The ground water below the pool had been monitored for contamination since October, 1988, and as late as January tests conducted by both the state and Wittaker Corp. had failed to detect any traces of the chemical, Sorsher said.

In April, Whittaker Corp. detected a TCE level of 4.8 p.p.m. at a 600-foot deep test well near the pool. State law allows TCE at only five parts per billion. A second test in mid-May found a reading 7.2 p.p.m. and the state was notified, Sorsher said.

Health officials said they were not notified of the contamination until May 19 because it took a month to process the test results. The state released the findings in response to press inquiries.

Bill Manetta, president of the Santa Clarita Water Company, said tests at the well found no TCE.

The test did find 1.3 p.p.b. of trichloroethane, or TCA, an industrial solvent considered to be much less dangerous than TCE, Manetta said. The maximum level of TCA allowed by the state is 200 p.p.b.

Manetta said the company's water is "absolutely safe." New tests will be conducted this week or next and the tests will be repeated again in three months, he said.

Bermite has been ordered to drill two additional wells 50 to 100 feet from the present test well see how far the toxic chemical has traveled in the ground-water system, state officials said. Water in the underground aquifer moves at the rate of a few inches a day.

Whittaker has also pumped out more than 20,000 gallons of ground water in an attempt to stop the spread of the toxic chemical, Sorsher said.

Representatives of Newhall County Water were also notified of the contamination, but their wells were not considered to be in danger since they are not in the path of the contaminated water's underground flow, state officials said.

WEDNESDAY, JUNE 28, 1989

Daily News

EDITION

SERVING ALL COMMUNITIES IN THE SANTA CLARITA VALLEY

25 CENTS

Tainted water found in Saugus

Test well on Bermite property shows high level of cancer-causing chemical

By DAVID PARRISH
Daily News Staff Writer

SAUGUS — Water containing more than a 1,000 times the allowable level of a cancer-causing chemical has turned up in a test well on the Bermite property, a former industrial site where military ordnance was manufactured, state officials said Tuesday.

State health officials said they did not know if the toxic waste "plume" from Bermite, near the Saugus Speedway, has spread to drinking water wells about a mile away, but that tests will be conducted.

"These are serious, regulated compounds that we are concerned about," said Alan Sorsher, a senior engineer for the state Department of Health Services.

Water companies operating wells in Saugus have been notified of the contamination, state officials said.

The tainted water would be dangerous, "if you were drinking it," Sorsher said.

Bermite's owner, Whitaker Corp., has been ordered to drill additional wells to determine how far the toxic waste has traveled in the ground water system, Sorsher said.

Seven parts per million of trichloroethylene (TCE) was found in a test well near an industrial degreasing pool that had been disassembled six years ago, he said.

Bermite has been closed for more than three years.

"When they first detected it, the lab came back with five parts per million of TCE," Sorsher said. "They resampled that well,

See BERMITE / Pg. 4

Contaminated water found in well on Bermite site

BERMITE / From Page 1

and the second lab came back at seven parts per million. The drinking level is five parts per billion. They are about a thousand-fold over the (safe) drinking water level."

While TCE was the main contaminant found in the water, the lab also detected traces of perchloroethylene, state officials said. TCE is an industrial degreaser and a known carcinogen, officials said.

When the contamination was first discovered, state officials were notified immediately, said Gordon Louttit, Whitaker's vice president and assistant general counsel.

"We have proposed various cleanup plans to the state," he said.

Last January, a sample of water from the contaminated test well did not show any TCE or other toxic chemicals, Sorsher said.

But, in mid-April another test of the well by Whitaker showed TCE was present, health officials said.

Health officials also said they did not learn of the contamination until mid-May because it took about a month to receive results from the lab.

Health officials said they were puzzled by the sudden appearance of TCE in the well after a clean test three months earlier.

Sorsher speculated that contaminated soil from the degreasing pool had finally reached the water table.

Whitaker has pumped more than 20,000 gallons of water from the well in an effort to capture the contaminants.

"I believe that has arrested or slowed down the spread of the plume," Sorsher said.

Whitaker is in the process of installing equipment to clean up both the soil near the degreasing pond and the well, Sorsher said.

Wenck Associates, Inc.

July 28, 1989

Consulting Engineers
(612) 475-0858
FAX -- (612) 476-0501

Mr. Alan Sorsher
Department of Health Services
Toxic Substances Control Division III
1405 North San Fernando Boulevard, Suite 300
Burbank, California 91504

Re: Progress Report No. 20
Implementation of Revised RCRA Closure Plan
Bermite Division, Whittaker Corporation
Week of July 24, 1989

Dear Mr. Sorsher:

The RCRA closure activities completed during the week of July 24 included completion of collection of the groundwater sampling for the quarterly groundwater sampling event number 4 and continued followup on NPDES and vapor extraction permits. In addition we are continuing to pursue EPA concurrence as to the nonhazardous nature of the treated groundwater from the 317 Area.

The fourth groundwater sampling event report will be submitted upon receipt and review of the sampling results.

If you have any questions regarding this report or the closure activities at Bermite, please do not hesitate to call Norm Wenck or me at (612) 475-0858.

Respectfully submitted,

WENCK ASSOCIATES, INC.
Christopher F. Thompson/cmd
Christopher F. Thompson, P.E.

CFT/aec
Enclosure

cc: Gordon Louttit, Whittaker
Glen Abdun Nur, Bermite
John Peloquin, Bermite
Jim Ross, EPA Region IX
Marsha Croninger, Jones, Day, Reavis & Pogue
Jeff Scott, EPA Region IX

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391-1418

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY GEORGE DEUKMEJIAN, *Governor*

DEPARTMENT OF HEALTH SERVICES
TOXIC SUBSTANCES CONTROL DIVISION (REGION 3)
1405 N. SAN FERNANDO BOULEVARD, SUITE 300
BURBANK, CA 91504

JUL 14 1989

Michael Feeley
U.S. EPA, Region IX
State Programs Branch
215 Fremont Street
San Francisco, CA 94105

Dear Mr. Feeley

CLOSURE OVERSIGHT REPORT FOR WHITTAKER CORP., BERMITE DIVISION,
EPA ID # CAD 064573108

Enclosed is the Closure Oversight report for Whittaker Corporation, Bermite Division, located in Saugus, CA. The report covers the status of closure-related site activities and compliance dates for the facility beginning October 1, 1988 and ending June 30, 1989.

If you have any questions regarding the report please contact me at (818) 567-3012.

Sincerely,

John A. Hinton, P.E., Chief
Facility Permitting Unit

cc: Jeff Scott
U.S. EPA, Region IX
215 Fremont Street
San Francisco, CA 94105

Paul Blais, Chief
Hazardous Waste Management Section
Toxic Substances Control Division
714/744 "P" Street
P.O. Box 924732
Sacramento, CA 94234-7320

STATUS REPORT
of
CLOSURE OVERSIGHT
for

WHITTAKER CORPORATION, BERMITE DIVISION
22116 West Soledad Canyon Road, Saugus, California
EPA ID NUMBER CAD 064573108

Prepared by:

California Department of Health Services
Toxic Substances Control Division
Region 3 - Burbank

JULY 1989

A. Introduction

This status report for the closure of the Whittaker-Bermite facility identifies the activities conducted, submittals by the facility and decisions made between October 1, 1988 and June 30, 1989. Facility background information is provided to place current activities in proper perspective, and the rationale for projected activities are also explained in detail.

B. Facility Background and History:

The Bermite Division of the Whittaker Corporation (Bermite) is located at 22116 West Soledad Canyon Road in Saugus, California. The EPA ID number for this facility is CAD 064573108.

DHS/EPA reviewed and modified the deficient interim status closure plans submitted by the facility. The modified closure plan was approved by EPA and DHS on 9/30/87 and modified again on 12/27/87. (A copy of the closure chronology is attached.) The parent corporation hopes to either sell the property for residential/-commercial development or develop the property themselves. Because of the future development, the company has been very anxious to complete implementation of the closure plan (despite the technical difficulties described below) and is attempting to achieve clean closure by remediation of residual contamination.

The facility occupies approximately 1100 acres (see attached maps) and has been used for ordnance, flares and explosives manufacturing since the early 1900s. Production ceased entirely in early 1987. The terrain consists of hills and valleys, mostly unimproved areas. Near the surface impoundments, the uppermost aquifer appears to be confined beneath a clay or shale aquiclude located beneath approximately 600 feet of very permeable alluvial formations. The thickness of this alluvial formation and the large cobbles and boulders within it have made drilling and installation of groundwater monitoring wells, vapor probes and groundwater sampling extremely difficult and technically challenging for the facility.

RCRA units included 8 storage units (6 portable, 2 stationary) for dry waste (contaminated paper towels, gloves, and waste explosives and flares); treatment tanks for lead azide wash solution; 5 thermal treatment units (burn pits, burn cage, pans, rails, and detonation range); and two synthetic lined surface impoundments (one for organic solvents and one for aqueous waste water). A RCRA Facility Assessment (RFA) report was prepared by Science Applications International Corporation in the fall of 1987, but the need for a RCRA Facility Investigation has not been determined. A groundwater monitoring system had not been installed until late 1988.

During the summer of 1987, solvent vapors were found in the soil underlying the site of the former solvent surface impoundment (317). This unit had been removed in 1983 without an approved closure plan.

The DHS/EPA approved closure plan called for characterization and remediation of the soil contamination, installation of a groundwater monitoring system and a monitoring program capable of verifying the absence of groundwater contamination from both impoundments.

C. Submittals and activities scheduled for fiscal year 89 (Oct 1, 1988 through Sept. 30, 1989)

Submitted on:

1. 12/22/88; Quarterly report for 10/88 groundwater monitoring. This report details the methods and protocol of groundwater sample collection and analysis and the resulting concentrations of all compounds analyzed.

2. 2/9/89; "Subsurface Vapor Probes at the 317 Area." This is a proposal for installing three nests containing 6 probes up to 120 feet deep.

3. 3/31/89; Quarterly report dated for 1/89 groundwater monitoring. This report details the methods and protocol of groundwater sample collection and analysis and the resulting concentrations of all compounds analyzed.

4. 5/9/89; "Vapor Probe Construction and Measurements at the 317 Area." This is a report of the "as-built" construction during April 1988 of the vapor probes and vapor concentrations taken over the subsequent four week period.

5. Letter dated May 19, 1989 reporting that the ground water samples obtained on April 17 - 19, 1989 showed organic solvent contamination in well 4.

6. 6/7/89; "Interim Response Action Plan, 317 Area Soil and Groundwater Remediation." This proposal for interim remedial responses was prepared after ground water monitoring well 4 detected organic solvent contamination.

   The proposal describes a pilot vapor extraction and carbon absorption system, as anticipated in the approved closure plan, and a groundwater extraction well (gradient control well) to extract contaminated groundwater in the immediate vicinity of the former surface impoundment. The proposal also includes a carbon ground water treatment system using granular activated to remove organic contamination from the water.

7. 6/7/89; "Specific Plan, Groundwater Quality Assessment Program." This plan has been developed using information gained from the site activities and RCRA closure plan implementation and addresses the requirements of 40CFR 265.93(d)(3). The plan proposes two wells to be installed

about 100 feet downgradient from the area of greatest known soil vapor contamination. The facility understands that additional wells will likely be required to completely assess the contamination.

8. 6/21/89; "Application for Permit to Construct, and Operate, Vapor Extraction System with Activated Carbon Treatment Control." This application to the South Coast Air Quality Management District includes a narrative of the proposed extraction system's location, construction, and operation. It includes manufacturer's literature on the mechanical equipment required.

9. 6/27/89; revised RCRA Part A application which covers the organic vapor and groundwater cleanup equipment. This must be re-submitted to correct errors on the Part A.

10. 6/28/89; Updated closure cost estimate.

D. Submittals due

1. Closure cost estimate update.
2. Corrected Part A application.
3a. Quarterly groundwater monitoring reports.
3b. First groundwater quality assessment.
3c. Subsequent groundwater quality assessments.
4. Part B Post-Closure Permit application for long-term soil and groundwater cleanup.
5. Progress reports on the soil and groundwater assessments and cleanup.

E. Due dates for identified items

1. The closure cost estimate must be updated annually for inflation and reported to DHS each March. The cost estimate must also be updated whenever changes in the closure activities change the cost estimate.

2. The corrected Part A application will be submitted by July 15, 1989.

3a. The quarterly groundwater monitoring reports are expected on July 15 and September 22 for the April and July sampling events, respectively.

3b. The first determination under the groundwater quality assessment plan is due "as soon as technically feasible and within 15 days after that determination, submit to the Regional Administrator a written report containing an assessment of the ground-water quality." The facility's assessment plan will have to be revised to meet the requirements of 40 CFR 265.93(a)(1)-(3). It is anticipated

that first formal determination will be made by October 15, 1989. However, interim groundwater analysis reports will be furnished by the facility as each well is completed and analyzed.

3c. Under 40 CFR 265.93(d)(7)(i), the determination of groundwater quality must be made on a quarterly basis and reported to EPA annually by March 1, per 40 CFR 265.94(b).

4. The post-closure permit application will be due 60 days after it is called in. It is anticipated that the call-in letter will be transmitted by August 30.

5. The facility will submit weekly reports on the soil and groundwater assessment and cleanup progress.

F. Actions needed:

1. Facility needs to revise the Part A application and obtain permits for air and water discharges from pilot soil vapor and groundwater treatment units.

2. Facility needs to complete implementation of groundwater assessment plan and soil vapor characterization.

3. DHS/EPA need to send Part B post-closure permit call-in letter to facility by August 30, 1989.

4. DHS/EPA need to review RFA report and determine if an RFI is needed. In addition, the regulatory mechanism (permit or 3008(h) order) for requesting an RFI must be decided upon.

5. DHS needs to review sampling and analysis results submitted during 1988 and closure certifications for other HWM units (burn areas, lead azide treatment tanks, dry storage units).

G. Status report on submittals/activities and actions needed

Except for the surface impoundments, Bermite has performed removal and/or verification sampling and submitted sampling results and closure certifications for all of the RCRA-regulated units. Sampling results were submitted in March 1988 and closure certifications were submitted during March - June of 1988 for these units, but these documents have not yet been reviewed.

All of the recent work done by the facility were focused on soil contamination at the 317 unit and the groundwater monitoring program.

SOIL CONTAMINATION AROUND 317 SURFACE IMPOUNDMENT

The extent of lateral and vertical solvent vapor contamination in the subsoils has not been fully determined. Initially, pilot trenching as deep as 50' and field soil vapor analysis were used in an attempt to define the vertical and lateral extent of vapor contamination. This has been only partly successful. The approved closure plan also calls for the installation of vapor probes to characterize the extent of contamination. Seven vapor probe nests, as deep as 120 feet below the 50' level, were installed between March 8 and mid-May 1989. Testing of these probes showed vapor concentrations of approximately 200 - 500 ppmv at these depths, with higher levels at shallower depths. An attempt to install probes down to 240' using the air-rotary drilling method was not successful.

The facility has been working to limit the spread of soil and groundwater contamination. 120-foot deep vapor vents will be installed during July 1989 using the cable tool drilling method. DHS staff plans to observe this drilling technique. If this method is workable, it will be employed to install deeper probes to complete the soil characterization and for deeper vents, if necessary for the removal of solvent vapors.

As indicated in item C.8 above, on June 21, 1989, the facility applied to the South Coast Air Quality Management District for a permit to proceed with the soil vapor extraction and removal system. The first phase proposes two 120-foot deep vapor vents. Soil gases will be drawn from the vents through pipes and through a two-stage activated carbon filter. The filtered air will be drawn through a vacuum blower and then discharged. This equipment will be ready to start up within three weeks after completion of the first vent. Additional vents may be installed depending on the results of the first two.

GROUND WATER CONTAMINATION

Three rounds of quarterly groundwater sampling have occurred during October 1988, January 1989, and April 1989. DHS collected and analyzed samples from well 1 and well 4 and QA/QC samples during the January sampling event. 37 samples were analyzed by DHS for the most important contaminants at this site. The analyses were performed at the State DHS lab in Los Angeles and no contamination was detected.

On May 23, 1989, the facility reported to DHS that the April sampling of well 4 detected contamination by organic solvents. The initial sample found 4.8 mg/l of TCE, 14.3 ug/l of dichloroethylene, and 11.7 ug/l of tetrachloroethylene (Perc). The well was re-sampled, and the ground water was analyzed by a second lab which reported 7.2 mg/l TCE.

The facility was instructed to notify the Regional Water Quality Control Board of these findings, as well as the EPA Regional Administrator in accordance with 40 CFR 265.93. The facility was instructed to submit a specific plan for ground water quality

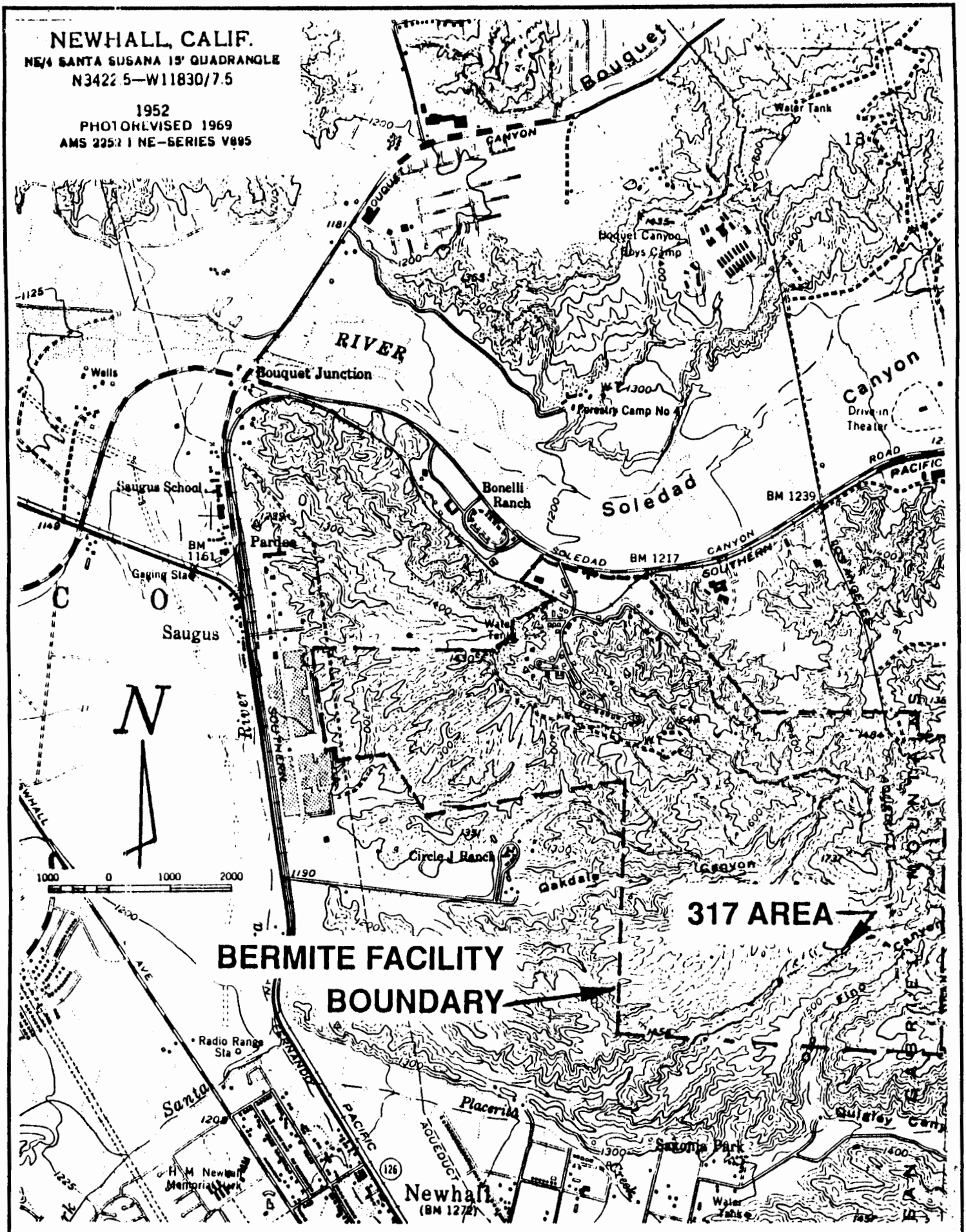
assessment. The facility was also instructed to notify the water supply companies in the area of the findings. Copies of the facility's letters to two water companies were sent to EPA and the DHS Public Water Supply Branch.

A follow-up meeting was held on 6/13/89 to discuss the facility's assessment plan and proposed pilot studies for a soil vapor extraction system and a ground water treatment system.

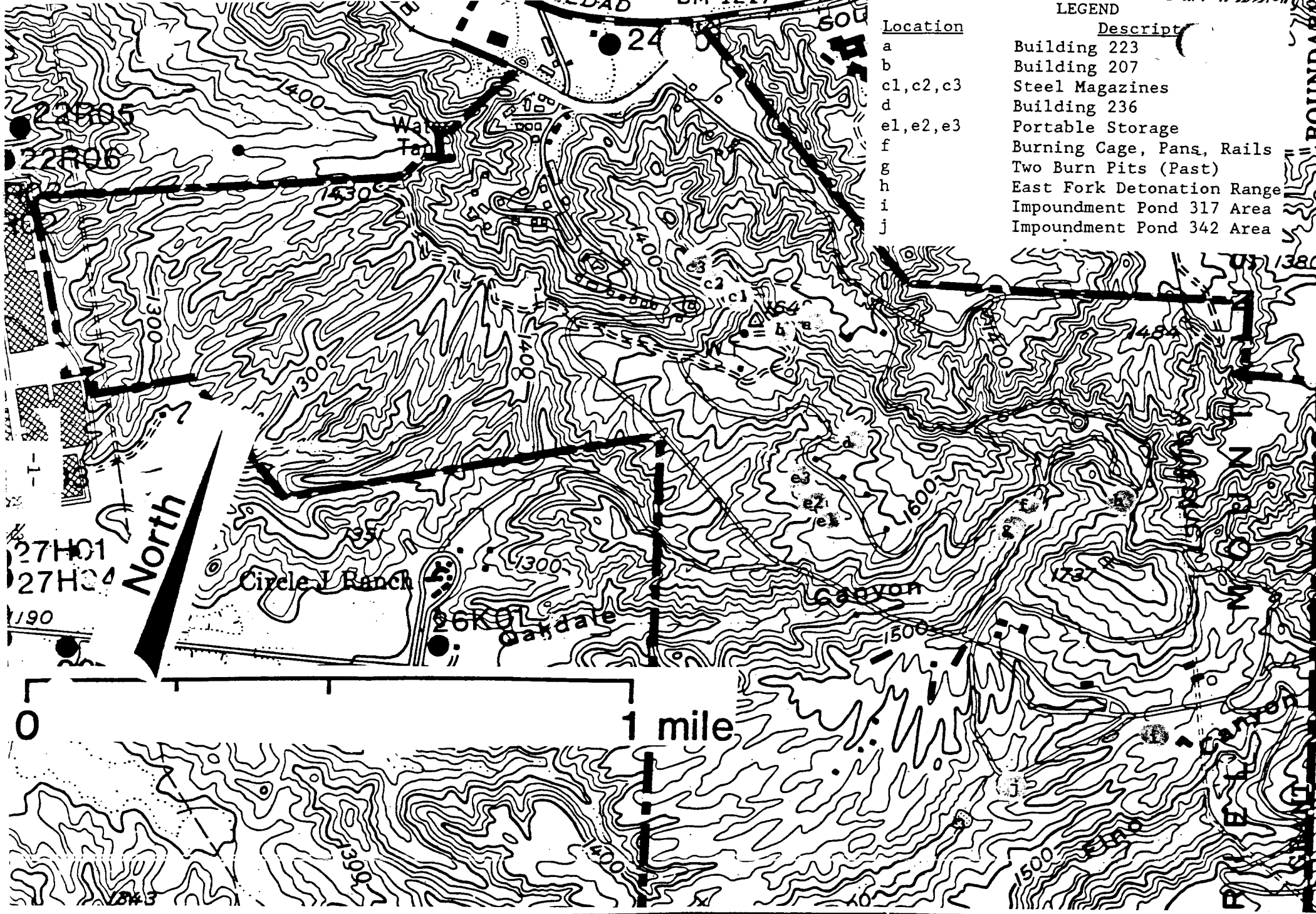
The facility is anxious to prevent the spread of groundwater contamination and has taken steps in that direction. The facility has installed an extraction well between the location of the former surface impoundment and well 4. They have pumped approximately 21,000 gallons of groundwater from this well in an attempt to halt or impede the spread of the plume. This water is being held in a portable tank until it can be treated in the proposed activated carbon filtration system, which is a separate system from that to be used for vapors from the soil. In addition to revising their Part A application to include the vapor and groundwater treatment units, the facility is pursuing discharge permits from the local sewerage agency and from the Regional Water Quality Control Board for the groundwater treated in this system.

In addition, the facility began drilling the first well called for in the assessment plan in late June and this well will be completed and developed by July 7, 1989.

In late June 1989, articles were published in three local newspapers on the groundwater contamination. Copies of the articles are attached.



BERMITE DIVISION - WHITTAKER CORPORATION	Consulting Engineers	JUN 1989
Site Plan	Wenck Associates, Inc. Twelve Oaks Center 15500 Wayzata Blvd. Wayzata, MN 55391	Fig. 1



BERMITE DIVISION - WHITTAKER CORPORATION	Wenck Associates, Inc. Consulting Engineers	FIG
LOCATION MAP OF RCRA UNITS	Twelve Oaks Center 15500 Wayzata Blvd. Wayzata, MN 55391	1

CLOSURE CHRONOLOGY

WHITTAKER CORPORATION, BERMITE DIVISION
CAD 064 573 108

DATE	ITEM
March, 1983	Bermite removes two surface impoundments (units 317 & 342) without approved closure plan.
August 15, 1983 - November 30, 1983	Three letters from Bermite to DHS describing removal of impoundments and analysis of limited subsoil sampling.
October 28, 1985	DHS sends NOD on surface impoundment closures.
November 20, 1985	Letter from Bermite to DHS in response to above NOD.
April 28, 1986	Letter from DHS to EPA Enforcement re: inadequate closure of 317 impoundment
June - July, 1986	Bermite's consultant takes soil samples from site of former 317 impoundment. Sampling plan was not approved by EPA or DHS.
August 1, 1986	Consultant submits amended closure plan in anticipation of consent agreement with EPA.
August 19, 1986	Bermite submits sampling plan and results of June/July sampling at former 317 impoundment site.
August 26, 1986	EPA consent agreement signed requiring: submittal of closure plan; additional closure sampling at site of former #317 surface impoundment demonstrating compliance with 40 CFR 265.228; engineer's certification of closure for 317 & 342 impoundments and lead azide tank system.
October 22, 1986	Bermite's consultant takes soil samples from open burning areas despite the fact that the sampling plan was not approved by EPA or DHS.
February 4, 1987	DHS letter to EPA enforcement with comments on Bermite's closure confirmation sampling deficiencies at 317 impoundment submitted 8/19/86.

February 10, 1987	DHS sends NOD on 8/1/86 closure plan (other regulated units besides impoundments) to Bermite's consultant .
February 18, 1987	Site visit by DHS and RWQCB.
March 3, 1987	Letter from EPA to Bermite noting above deficiencies and requiring revised closure plan including soil characterization and hydrogeologic assessment of former surface impoundment sites and groundwater monitoring.
May 6, 1987	DHS receives revised closure plan including workplan for characterization and hydrogeologic assessment at 317 and 342 sites.
June, 1987	DHS and EPA decide to modify Bermite's revised closure plan. Approval targeted for 9/30/87.
June/July, 1987	Bermite begins executing above workplan at their risk, without workplan approval by DHS or EPA.
July 16, 1987	RCRA Facility Assessment Visual Site Inspection by DHS, EPA, RWQCB, and EPA's RFA contactor.
August 4, 1987	CEQA notice of exemption drafted.
August 7, 1987	Public notice of closure plan and public hearing published in Newhall Signal. Public notice period begins.
	Informational site visit by DHS SCS FPU, SMU geologist, and soil chemist from HQ tech. services environmental assessment unit.
September 10, 1987	Public hearing on closure plan held at local college. Public comment period closes.

L.A TIMES 6/29/89

GARY THORNHILL

Aerial view shows site of Bermite degreasing pool, now excavated to remove contaminated soil. State officials say pool was source of chemical that contaminated some area ground water, although drinking water apparently has not been tainted.

Pollution Found in Well at Bermite Plant Site

By HECTOR TOBAR, *Times Staff Writer*

A cancer-causing chemical leaking from the former site of the Bermite ordinance plant in Saugus has contaminated some ground water, but state officials said Wednesday that there is no evidence it has tainted drinking supplies.

The chemical, trichloroethylene, or TCE, was found in a test well on the Bermite property in April, said Alan Sorsher, associate engineer with the state Department of Health Services.

State officials said tests conducted by Wittaker Corp., which owns the property, found TCE at 7.2 parts per million, more than 1,000 times higher than the levels allowed by the state.

Sorsher said, however, that there was no evidence that TCE had contaminated drinking water at nearby wells. "We don't feel there is any cause for alarm at this point," he said. "We're continuing to assess the situation. We're just glad we caught it when we did."

The well closest to the Bermite site used for drinking water is operated by the Santa Clarita Water Company and is about a mile away, Sorsher said. Although the contamination will flow slowly in the direction of the public well, Sorsher said a Whittaker Corp. plan to remove the contaminated water and purify it should prevent the chemical from spreading to drinking supplies.

Bermite, a site for the production of military explosives since 1906, was closed in 1987 because of dwindling demands for the plant's products and the increasing value of Santa Clarita land. The source of the ground-water contamination was a pool that had been filled with industrial solvents used to degrease equipment. The pool was taken out of operation and emptied about six years ago, Sorsher said.

The ground water below the pool had been monitored for contamination since October, 1988, and as late as January tests conducted by both the state and Wittaker Corp. had failed to detect any traces of the chemical, Sorsher said.

In April, Whittaker Corp. detected a TCE level of 4.8 p.p.m. at a 600-foot deep test well near the pool. State law allows TCE at only five parts per billion. A second test in mid-May found a reading 7.2 p.p.m. and the state was notified, Sorsher said.

Health officials said they were not notified of the contamination until May 19 because it took a month to process the test results. The state released the findings in response to press inquiries.

Bill Manetta, president of the Santa Clarita Water Company, said tests at the well found no TCE.

The test did find 1.3 p.p.b. of trichloroethane, or TCA, an industrial solvent considered to be much less dangerous than TCE, Manetta said. The maximum level of TCA allowed by the state is 200 p.p.b.

Manetta said the company's water is "absolutely safe." New tests will be conducted this week or next and the tests will be repeated again in three months, he said.

Bermite has been ordered to drill two additional wells 50 to 100 feet from the present test well see how far the toxic chemical has traveled in the ground-water system, state officials said. Water in the underground aquifer moves at the rate of a few inches a day.

Whittaker has also pumped out more than 20,000 gallons of ground water in an attempt to stop the spread of the toxic chemical, Sorsher said.

Representatives of Newhall County Water were also notified of the contamination, but their wells were not considered to be in danger since they are not in the path of the contaminated water's underground flow, state officials said.

Water contamination found near Bermite plant, landfill

Cancer-causing agent found in groundwater; situation monitored, says health official

By SHARON HORMELL
Signal staff writer

Contamination of groundwater by a cancer-causing chemical has been found at two sensitive SCV locations — the former Bermite dynamite manufacturing plant in Saugus and at Chiquita Canyon landfill near Val Verde.

At the Bermite parcel on Soledad Canyon Road, trichloroethlene (TCE) was found in amounts more than a hundred times greater than the state allows.

A plastic-lined pond used to collect volatile organic chemical wastes apparently leaked and the chemical was detected months ago by a monitoring well, said Alan Sorsher, an assistant waste management engineer for the state Department of Health Services.

Levels of TCE greater than 5 parts per billion (PPB) must be reported to state water officials, Sorsher said. An April test revealed a level of 4.8 parts per million and a subsequent test was even higher, at 7.2 parts per million, more than a hundred times the state action level.

A monitoring well on the south side of Chiquita Canyon landfill showed a TCE level of 5 parts per billion, said Richard Haughey of EMCON Associates, a firm working on the landfill's expansion plans.

He said the contamination would not endanger residents of Val Verde because the community is not in the path of the landfill's groundwater flow.

Such contaminations of groundwater must be reported to state health and water officials, and Haughey said the landfill company was attempting to determine the source of the chemical.

Chiquita Canyon landfill is operated by Laidlaw Waste Systems Inc. and owned by The Newhall Land and Farming Co. Laidlaw is seeking to more than double the landfill's current dumping area and daily intake.

The Bermite property is owned by the Whitaker Corp., which has engaged in a cleanup of the burn pits and processing areas that were found several years ago to be littered with explosive material and other chemicals.

The plastic-lined pond measured about 50 feet square and was about two feet deep. It was removed in 1983 as part of the Bermite cleanup supervised by state officials.

The pond is located at least 1.5 miles from drinking water wells, Sorsher said, which were unlikely to be affected because groundwater moves only a few inches per day.

Sorsher said the contamination was reported by an official of the Whitaker Corp. "They are complying," Sorsher said. " We don't think there's any danger to the community, but we are watching the situation as it develops."

WEDNESDAY, JUNE 28, 1989

Daily News

EDITION

SERVING ALL COMMUNITIES IN THE SANTA CLARITA VALLEY

25 CENTS

Tainted water found in Saugus

Test well on Bermite property shows high level of cancer-causing chemical

By DAVID PARRISH
Daily News Staff Writer

SAUGUS — Water containing more than a 1,000 times the allowable level of a cancer-causing chemical has turned up in a test well on the Bermite property, a ner industrial site where mili- y ordnance was manufactured, state officials said Tuesday.

State health officials said they did not know if the toxic waste "plume" from Bermite, near the Saugus Speedway, has spread to drinking water wells about a mile away, but that tests will be conducted.

"These are serious, regulated compounds that we are concerned about," said Alan Sorsher, a senior engineer for the state Department of Health Services.

Water companies operating wells in Saugus have been notified of the contamination, state officials said.

The tainted water would be dangerous, "if you were drinking it," Sorsher said.

Bermite's owner, Whitaker Corp., has been ordered to drill additional wells to determine how far the toxic waste has traveled in the ground water system, Sorsher said.

Seven parts per million of trichloroethylene (TCE) was found in a test well near an industrial degreasing pool that had been disassembled six years ago, he said.

Bermite has been closed for more than three years.

"When they first detected it, the lab came back with five parts per million of TCE," Sorsher said. "They resampled that well,

See BERMITE / Pg. 4

Contaminated water found in well on Bermite site

BERMITE / From Page 1

and the second lab came back at seven parts per million. The drinking level is five parts per billion. They are about a thousand-fold over the (safe) drinking water level."

While TCE was the main contaminant found in the water, the lab also detected traces of perchloroethylene, state officials said. TCE is an industrial degreaser and a known carcinogen, officials said.

When the contamination was first discovered, state officials were notified immediately, said Gordon Louttit, Whitaker's vice president and assistant general counsel.

"We have proposed various cleanup plans to the state," he said.

Last January, a sample of water from the contaminated test well did not show any TCE or other toxic chemicals, Sorsher said.

But, in mid-April another test of the well by Whitaker showed TCE was present, health officials said.

Health officials also said they did not learn of the contamination until mid-May because it took about a month to receive results from the lab.

Health officials said they were puzzled by the sudden appearance of TCE in the well after a clean test three months earlier.

Sorsher speculated that contaminated soil from the degreasing pool had finally reached the water table.

Whitaker has pumped more than 20,000 gallons of water from the well in an effort to capture the contaminants.

"I believe that has arrested or slowed down the spread of the plume," Sorsher said.

Whitaker is in the process of installing equipment to clean up both the soil near the degreasing pond and the well, Sorsher said.

Wenck Associates, Inc.

Consulting Engineers
(612) 475-0858
FAX – (612) 476-0504

June 29, 1989

Mr. Mark Liu
South Coast Air Quality Management District
9150 Flair Drive
El Monte, California 91731

Re: Application for Permit to Construct and Operate,
Vapor Extraction System with Activated Carbon Treatment Control,
Bermite Division, Whittaker Corporation

Dear Mr. Lie:

The purpose of this letter is to provide additional documentation in the form of a correction to the above referenced application received by the SCAQMD on June 22, 1989. On Form 400A of the application, it was indicated that a CEQA document had not been prepared for this project. It should be noted that the California Department of Health Services (DHS), Toxic Substances Control Division did prepare a CEQA document and an exemption to it as part of the RCRA closure activities at the Bermite facility. The exemption is provided by Section 15307 of the CEQA guidelines. Attachment 1 to this letter is a copy of the DHS "Notice of Exemption" which was provided as part of the public notice procedure for the RCRA Closure Plan for the Bermite facility. In addition to this documentation, included as Attachment 2 are two pages from the approved RCRA Closure Plan for the Bermite facility where it is indicated that a vapor extraction system was envisioned by the DHS as one of the remedial activities required for closure of the 317 Area RCRA unit.

Mr. Liu, I have not been able to reach you by telephone although I have left messages on your telephone answering machine repeatedly since sending the above referenced application. I would appreciate hearing from you regarding

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391-1418

Wenck Associates, Inc.

Consulting Engineers
(612) 475-0858
FAX – (612) 476-0504

this application and subsequent approval of it. You may call me at (612) 475-0858. Your prompt attention to this matter is appreciated.

Sincerely,

WENCK ASSOCIATES, INC.

Christopher F. Thompson, P.E.

CFT/aec
Attachments

cc: Mr. Gordon Louttit, Whittaker Corporation
Mr. John Peloquin, Bermite
Mr. Glen Abdun Nur, Bermite
Mr. Alan Sorsher, DHS
Mr. Jeff Scott, EPA Region IX
Mr. Jim Ross, RWQCB

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391-1418

ATTACHMENT 1

APPENDIX E

NOTICE OF EXEMPTION

TO: X Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

___ County Clerk
County of_____

FROM: Department of Health Services
Toxic Substances Control Division
107 South Broadway, Room 7011
Los Angeles, CA 90012

Closure Plan for Hazardous Waste Management Units, Whittaker - Bermite Corp.
Project Title

22116 Soledad Canyon Road
Project Location - Specific

22116 Soledad Canyon Road — Los Angeles
Project Location - City — **Project Location - County**

SEE ATTANCHMENT

Description of Nature, Purpose, and Beneficiaries of Project

California Departmentof HealthServices,
Toxic Substances Control Division
Southern California Section
107 South Broadway, Room 7011
Los Angeles, CA 90012

Name of Public Agency Approving Project

Whittaker Corporation, Bermite Division

Name of Person or Agency Carrying Out Project

Exempt Status: (Check One)

___ Ministerial (Sec. 21080(b)(1); 15268);
___ Declared Emergency (Sec. 21080(b)(3); 15269(a));
___ Emergency Project (Sec. 21080(b)(4); 15269(b)(c)).
X CATEGORICAL EXEMPTION, SEE ATTACHMENT

Reasons why project is exempt:

See Attachment

Contact Person — **Area Code/Telephone/Extension**

Alan Sorsher — 213/ 620/ 2380

If filed by applicant:

1. Attach certified document of exemption finding.
2. Has a notice of exemption been filed by the public agency approving the project? Yes ___ No ___

Date Received for Filing: _____

Signature — Supervising Waste Mgt. Engineer
Title

Revised March 1986

ATTACHMENT TO CEQA NOTICE OF EXEMPTION

All the wastes have removed from the portable magazines, the storage buildings and the tank treatment area. It is expected that closure activities for these units will primarily focus on sampling to verify that the units are not contaminated. If they are found to be uncontaminated they may be sold to another explosives manufacturer, demolished, removed or otherwise managed as non-hazardous waste.

The two impoundments were emptied of waste and disposed of at a hazardous waste disposal facility in 1983. An exploratory boring program performed by Bermite earlier this year indicates ~~that~~ some relatively minor leakage of solvents from one of the units. This is a common occurrence when closing surface impoundments. The closure plan activities will involve further study to confirm the extent of the leakage and to mitigate it, so that the closure performance standard will be met.

A similar investigation will be performed at the former open burning areas to determine if contamination is present there. If necessary, appropriate mitigation measures will be taken at these units also.

Although some mitigation measures will be necessary to meet the closure performance standard as discussed above, based upon the information currently available, it should not be construed that the site is heavily contaminated or that it presents a major threat to public health or the environment.

It should also be clear that the current project under consideration is only the formal closure of the hazardous waste management units. Future development or uses of the land may be the subject of a separate action under CEQA.

Beneficiaries of the project:

Bermite has ceased all operations at the entire 1100 acre facility and intends to sell the property. A certified closure under the various hazardous waste laws would probably increase the desireablity of the property. We understand that the property will then be developed for residential and commercial purposes. The beneficiaries of the project would therefore be Bermite, the future owners and developers of the property and the general public by means of jobs, homes and an increased tax base.

Reasons why the project is exempt:

1. Based upon the information currently available, i.e. the types, quantities and concentrations of waste residues, Department foresees no reason why the closure activities at the site will have a significant effect on the environment.

ATTACHMENT TO CEQA NOTICE OF EXEMPTION

Project Purpose:

As required by State and Federal laws, Whittaker Corporation, Bermite Division, (Bermite) has submitted a closure plan which describes steps to be taken by Bermite to remove or decontaminate the hazardous waste management units at the Saugus facility and verify that decontamination is complete.

In general, the closure performance standard states the the owner or operator must close his facility in a manner that:

(a) Minimizes the need for further maintenance, and

(b) Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous waste constituents, leachate, contaminated rainfall, or waste decomposition products to the ground or surface waters or to the atmosphere.

The purpose of the project is to meet the closure performance standard.

Nature of Project:

The following hazardous waste management units are addressed in Bermite's closure plan required by Title 40, Code of Federal Regulation, and Title 22, California Administrative Code:

- Six portable magazines used for storage of containers holding dry rocket propellant and propellant wastes.

- Two buildings used to store fiber drums containing bags holding dry paper and gloves contaminated with explosive wastes and ammo cans containing off-specification flare mix, powder, and rocket propellant.

- A system of small above-ground tanks used for stabilizing wash water containing lead azide.

- Two former surface impoundments, one 50ft. by 50 ft. held solvent wastes, and the other 30ft. by 60 ft. held water containing stabilized phosphorous.

- Thermal treatment areas where open burning of waste explosives and contaminated paper and gloves occurred. These areas include the former burn cage area, the former pans and rails area, two former burn pits, and the "East Fork" detonation range where waste explosives where remotely detonated.

ATTACHMENT TO CEQA NOTICE OF EXEMPTION

2. Section 15307 of the CEQA guidelines provides a categorical exemption for "actions taken by regulatory agencies as authorized by state law or local ordinance to assure the maintenance, restoration, or enhancement of a natural resource where the regulatory process involves procedures for protection of the environment."

Section 15308 of the CEQA guidelines provides a categorical exemption for "actions taken by regulatory agencies as authorized by state law or local ordinance to assure the maintenance, restoration, enhancement or protection of the environment where the regulatory process involves procedures for protection of the environment."

The Department considers that the approval of the closure plan involving the removal or other mitigation of any residual contamination that may be on the site can only enhance and protect natural resources such as surface and ground water, air and soil and the general environment.

ATTACHMENT 2

II CLOSURE ACTIVITIES

A. Removal of Volatile Organic Chemical (VOC) Vapors from Soil

Bermite has proposed excavation of impoundment soils following field testing to determine the extent of VOC contamination. Sampling and staged removal of an initial 10-foot wide trench may be approved by EPA and DHS. Such approval would be contingent upon the proposal addressing all potential regulatory concerns including but not limited to the following factors:

- Protection of public health and the environment.
- Compliance with additional regulatory requirements that may be triggered.
- Full details of proposed decontamination/treatment procedures.
- Full details of sampling, measurements, analysis and QA/QC procedures during the cleanup and verification.

Following a review by DHS and EPA of the field and laboratory data obtained during the initial sampling and trenching operation and the effectiveness of the operation itself, approval may be granted to expand the technique to the rest of the 317 impoundment area. A copy of Bermite's trenching plan as modified by DHS and EPA is attached.

Depending upon field conditions encountered and the effectiveness of the above characterization and removal technique, an additional characterization and mitigation method such as vapor extraction may be needed to supplement or replace the stagewise removal and sampling. If it is determined that such a program is required, it shall address the following main points:

1. Prior to installing the extraction system, determine the vertical and horizontal extent of contamination by installing a series of gas probes or other approved methods around the area of high vapor concentration determined during the previous boring/excavation work.

   - Multiple completion probes may be used to reduce drilling costs. The probe layout and design, including the seals must be approved by DHS, EPA, the South Coast Air Quality Management District and the L. A. Regional Water Quality Control Board (the Agencies) prior to field installation.

2. The effective zone of influence and other design parameters shall be determined by pilot testing prior to the design of the extraction system. The pilot test shall be proposed by Bermite, approved by the regulatory agencies prior to execution

and will employ at least two wells, which may be operated with vacuum, vacuum/injection, or vacuum/open to the atmosphere. All air exiting the wells shall be treated by an activated carbon absorber.

3. The sampling and analysis plan and the design of the extraction system shall be approved by the Agencies prior to installation. The submittal shall include a detailed discussion of the engineering analysis used to design the system. Additional sampling probes shall be installed beyond the air injection wells to ensure that no VOC are pushed away from the system.

4. The system shall be operated until the total VOC concentration in air from the extraction well(s) reaches zero ppm above ambient background air as measured on a properly calibrated field gas chromatograph. Intermittent monitoring and operation may continue as necessary to ensure that no further VOC emanates from the soil formation upon further equilibration.

B. Plan for Sampling Metals and Non-Volatile Organic Constituents

Since various salts of "heavy" metals may have been placed in the impoundment, the underlying soil must be checked for contamination above the naturally occurring background levels. Since these contaminants do not migrate as the volatile organics, the sampling for these constituents may be shallower.

1. Objectives of soil sampling:

The primary objective is to determine the extent of soil contamination, where contaminated soils are those soils with concentrations of hazardous constituents, as listed in Appendix VIII of 40 CFR 261, significantly greater than background concentrations. If Bermite wishes to demonstrate that any hazardous constituents left in the soils will not cause unacceptable risks to human health or the environment the data shall be of sufficient quality for the EPA and DHS to determine the environmental and health effect of the constituents.

2. Preliminary investigation of soils:

Analytical data from the June - July 1987 sampling episode may be of assistance in determining the concentrations of metals in the soil. Using data from all the boreholes, Bermite shall calculate the sample mean, standard deviation, and coefficient of variation with respect to the individual metals at each waste management unit sampled.

3. Additional background samples:

Samples shall be obtained from at least four additional background locations as described in the sample plan for the Burn Area.

Wenck Associates, Inc.

May 20, 1988

Consulting Engineers
(612) 475-0858
FAX – (612) 476-0504

Mr. Alan Sorsher
Department of Health Services
Toxic Substances Control Division
107 S. Broadway, Room 7128
Los Angeles, California 90012

Re: Progress Report No. 16 -
Implementation of Revised RCRA Closure Plan
Week of May 7 and May 13, 1988

Dear Mr. Sorsher:

Work continued on the closure of the Bermite facility with the additional soil characterization at the 317 area. The excavation of trench B has continued to the 22 foot depth. All required field and laboratory soils analysis is being performed. Upon completion of trench B a report summarizing the work completed and the results of the characterization will be submitted for your review and approval.

Two reports were submitted to DHS and EPA during the last work period: "Certification of Clean Closure for RCRA Units 223, 236 and Lead Azide Area", and "Groundwater Monitoring System Proposed Final Configuration". Please review these documents as soon as possible.

If you have any questions on any of the matters included in this report please do not hesitate to contact me.

Respectfully submitted,

WENCK ASSOCIATES, INC.

Christopher F. Thompson, P.E.
Senior Engineer

cc: Michael Fernandez, EPA
Larry Peterson, RWQCB

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391-1418

Wenck Associates, Inc.

April 29, 1988

Consulting Engineers
(612) 475-0858
FAX – (612) 476-0504

Mr. Alan Sorsher
Department of Health Services
Toxic Substances Control Division
107 S. Broadway, Room 7128
Los Angeles, California 90012

Re: Progress Report No. 14 -
Implementation of Revised RCRA Closure Plan
Week of April 25, 1988

Dear Mr. Sorsher:

Work continued on the closure of the Bermite facility with the additional soil characterization at the 317 area. As of today we have reached the 18 foot depth in trench C. The soils excavated are being placed in an area to the northwest of the 317 area.

Field OVA readings and soil samples for laboratory analysis are being taken as directed by the approved RCRA Closure Plan and the Work Plan for the Soil Characterization at the 317 Area.

As per our telephone conversation today, we will be revising the sampling frequency during the excavation work. A letter detailing these changes will be sent to you during the next work period.

If you have any questions or comments on this report, please do not hesitate to contact me. I will be at the Bermite facility Wednesday through Friday next week.

Respectfully submitted,

WENCK ASSOCIATES, INC.

Christopher F. Thompson, P.E.
Senior Engineer

cc: Michael Fernandez, EPA
Larry Peterson, RWQCB

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391-1418

Wenck Associates, Inc.

Consulting Engineers
(612) 475-0858

March 9, 1988

Mr. Alan Sorsher
Department of Health Services
Toxic Substances Control Division
107 S. Broadway, Room 7128
Los Angeles, California 90012

Re: Certification of Clean Closure
of Portable Storage Units at
Bermite Division - Whittaker Corporation
22116 West Soledad Canyon Road
Saugus, California 91350

Dear Mr. Sorsher:

Enclosed herewith is a signed Certification of Clean Closure of the six portable storage units at the Bermite facility. This documentation and certification is presented to you in accordance with our discussions which took place at our meeting on March 3, 1988. As we indicated at the meeting, these units have been sold and the new owner is anxious to take possession of them.

We plan to release these units to the new owners during the week of March 14, 1988. If you have any comments or questions on the documentation please call me.

Respectfully submitted,

WENCK ASSOCIATES, INC.

Norman C. Wenck, P.E.

NCW/cmk
Enclosure

cc: Gordon Louttit, Whittaker
Michael Fernandez, U.S. EPA

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

Wenck Associates, Inc.

February 19, 1988

Consulting Engineers
(612) 475-0858

Mr. Alan Sorsher
Department of Health Services
Toxic Substances Control Division
107 S. Broadway, Room 7128
Los Angeles, California 90012

Re: Progress Report No. 12 -
Implementation of Revised RCRA Closure Plan
Week of February 15, 1988

Dear Mr. Sorsher:

Work continued on the closure of the Bermite facility with the trenching at the 317 area. As of this date, the trenching has been completed to the 30 foot depth with two areas still exhibiting elevated readings using the OVA meter.

Enclosed herewith as Tables 1, 2 and 3, which are the analytical metal results of the samples from between the 16 and 18 foot depth at the 317 area, the background area metal results, and the 8270 results on selected samples from the 317 area, respectively.

Information on the cross-section of the excavated area is being prepared and will be forwarded to you as soon as it is completed.

If you have any comments or questions on anything in this report please feel free to contact me.

Respectfully submitted,

WENCK ASSOCIATES, INC.

Norman C. Wenck, P.E.
President

cc: Michael Fernandez, EPA
Elizabeth Lafferty, DHS
Larry Peterson, RWQCB

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

ANALYSIS RESULTS FROM
SOIL SAMPLING AT
RCRA UNITS

TABLE 1

METAL CONCENTRATIONS AT 317 AREA, 16 TO 18 FEET
All Values Are mg/kg (ppm)

SAMPLE I.D.	SAMPLE DEPTH	Arsenic	Barium	Cadmium	Chromium	Lead	Magnesium	Mercury	Selenium	Silver
317-3369-4	16.0-16.5'	0.720	52.000	ND	4.350	0.050	1435.000	ND	0.002	0.005
317-3369-5	16.5-17.0'	1.100	59.000	ND	21.890	0.050	4860.000	ND	0.100	0.005
317-3369-6	17.0-18.0'	0.850	73.000	ND	247.470	0.050	1715.000	ND	0.180	0.005
317-3752-4	16.0-16.5'	1.140	30.000	ND	6.890	0.050	2840.000	ND	0.002	0.430
317-3752-5	16.5-17.0'	1.550	43.000	ND	6.260	0.050	3200.000	ND	0.002	0.390
317-3752-6	17.0-18.0'	1.280	39.000	ND	2.710	0.050	2050.000	ND	0.090	0.390
317-0745-4	16.0-16.5'	1.150	47.000	ND	0.770	0.050	2130.000	ND	0.002	0.005
317-0745-5	16.5-17.0'	1.450	36.000	ND	1.590	0.050	2700.000	ND	0.090	0.005
317-0745-6	17.0-18.0'	1.450	40.000	ND	0.250	0.050	2120.000	ND	0.090	0.005
317-6089-4	16.0-16.5'	0.640	69.000	ND	0.770	0.050	1350.000	ND	0.002	0.005
317-6089-5	16.5-17.0'	0.660	32.000	ND	6.760	0.050	1690.000	ND	0.180	0.005
317-6089-6	17.0-18.0'	1.990	25.000	ND	0.860	0.050	2150.000	ND	0.090	0.005
317-2092-4	16.0-16.5'	0.950	62.000	ND	5.740	0.050	1805.000	ND	0.090	0.005
317-2092-5	16.5-17.0'	1.110	55.000	ND	6.290	0.050	2350.000	ND	0.002	1.680
317-2092-6	17.0-18.0'	1.020	66.000	ND	3.980	0.050	1280.000	ND	0.002	0.005
317-1397-4	16.0-16.5'	1.330	33.000	ND	6.190	0.050	1930.000	ND	0.002	0.360
317-1397-5	16.5-17.0'	1.170	53.000	ND	8.400	0.050	620.000	ND	0.100	0.005
317-1397-6	17.0-18.0'	1.200	60.000	ND	5.230	0.050	3945.000	ND	0.180	0.005
317-6331-4	16.0-16.5'	0.760	57.000	ND	0.380	4.000	2200.000	ND	0.002	0.005
317-6331-5	16.5-17.0'	0.590	67.000	ND	0.900	11.500	1600.000	ND	0.200	0.450
317-6331-6	17.0-18.0'	1.500	78.000	ND	0.250	9.000	1500.000	ND	0.002	0.005
317-7573-4	16.0-16.5'	1.000	76.000	ND	7.990	0.050	2740.000	ND	0.170	0.005
317-7573-5	16.5-17.0'	1.050	32.000	ND	6.760	0.050	2190.000	ND	0.090	0.400
317-7573-6	17.0-18.0'	1.240	63.000	ND	5.520	0.050	4080.000	ND	0.090	0.005
Detection Limit		0.004	0.100	0.010	0.020	0.100	0.002	0.004	0.004	0.010
Average Concentration		1.121	51.958	0.000	14.925	1.065	2270.000	0.000	0.073	0.174
Standard Deviation		0.332	15.909	0.000	49.740	2.964	972.945	0.000	0.070	0.366
Variance		0.111	253.085	0.000	2474.051	8.787	946621.739	0.000	0.005	0.134
Coefficient of Variation		29.663	30.618	ERR	333.265	278.447	42.861	ERR	95.908	209.663
Maximum Value		1.990	78.000	0.000	247.470	11.500	4860.000	0.000	0.200	1.680
Total Number of Samples		24.000	24.000	24.000	24.000	24.000	24.000	24.000	24.000	24.000

Note:
All No Detection Values (ND) Have Been Given A Value
Equal To 1/2 The Detection Value For Purposes Of Calculation

ANALYSIS RESULTS FROM
SOIL SAMPLING AT
RCRA UNITS

TABLE 2

BACKGROUND METAL CONCENTRATIONS

CONCENTRATION mg/kg (ppm)

SAMPLE I.D.	SAMPLE DEPTH	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Copper	Flouride	Lead	Magnesium	Mercury	Nickel	Selenium	Silver	Thallium
BGA-2323-1	0.0-0.5'	ND	4.00	50.00	ND	2.50	ND	5100.00	ND	5.00	50.00	4.00	1400.00	ND	5.00	ND	ND	ND
BGA-2323-2	0.5-1.0'	ND	3.00	25.00	ND	2.50	ND	3100.00	ND	5.00	340.00	1.50	1100.00	ND	5.00	ND	ND	ND
BGA-2323-3	1.0-2.0'	ND	5.00	76.00	ND	7.00	ND	3100.00	ND	5.00	50.00	1.50	3300.00	ND	20.00	ND	ND	ND
BGA-2323-4	2.0-3.0'	ND	1.50	25.00	ND	2.50	ND	1500.00	ND	5.00	50.00	1.50	960.00	ND	5.00	ND	ND	ND
BGA-2323-5	3.0-4.0'	ND	4.00	25.00	ND	2.50	ND	1800.00	ND	5.00	170.00	1.50	1200.00	ND	5.00	ND	ND	ND
BGA-2323-6	4.0-5.0'	ND	1.50	25.00	ND	2.50	ND	1600.00	ND	5.00	180.00	1.50	1200.00	ND	5.00	ND	ND	ND
BGA-2822-1	0.0-0.5'	ND	5.00	53.00	ND	6.00	ND	6200.00	ND	5.00	420.00	4.00	1700.00	ND	5.00	ND	ND	ND
BGA-2822-2	0.5-1.0'	ND	4.00	25.00	ND	2.50	ND	4300.00	ND	5.00	180.00	12.00	1400.00	ND	5.00	ND	ND	ND
BGA-2822-3	1.0-2.0'	ND	4.00	25.00	ND	2.50	ND	2200.00	ND	5.00	130.00	1.50	1700.00	ND	5.00	ND	ND	ND
BGA-2822-4	2.0-3.0'	ND	1.50	25.00	ND	2.50	ND	2100.00	ND	5.00	160.00	1.50	1100.00	ND	5.00	ND	ND	ND
BGA-2822-5	3.0-4.0'	ND	5.00	25.00	ND	2.50	ND	1700.00	ND	5.00	160.00	1.50	1300.00	ND	5.00	ND	ND	ND
BGA-2822-6	4.0-5.0'	ND	6.00	25.00	ND	2.50	ND	2000.00	ND	5.00	110.00	1.50	1600.00	ND	5.00	ND	ND	ND
BGA-0115-1	0.0-0.5'	ND	5.00	52.00	ND	6.00	ND	4500.00	ND	23.00	390.00	4.00	1500.00	ND	5.00	ND	ND	ND
BGA-0115-2	0.5-1.0'	ND	4.00	64.00	ND	7.40	ND	5700.00	ND	5.00	180.00	4.00	1900.00	ND	5.00	ND	ND	ND
BGA-0115-3	1.0-2.0'	ND	4.00	25.00	ND	8.20	ND	5300.00	ND	14.00	380.00	4.00	2100.00	ND	5.00	ND	ND	ND
BGA-0115-4	2.0-3.0'	ND	5.00	56.00	ND	9.00	ND	3400.00	ND	5.00	50.00	4.00	2300.00	ND	5.00	ND	ND	ND
BGA-0115-5	3.0-4.0'	ND	4.00	25.00	ND	2.50	ND	2100.00	ND	5.00	160.00	4.00	1100.00	ND	5.00	ND	ND	ND
BGA-0115-6	4.0-5.0'	ND	6.00	25.00	ND	2.50	ND	1800.00	ND	5.00	120.00	1.50	1200.00	ND	5.00	ND	ND	ND
BGA-1223-1	0.0-0.5'	ND	5.00	25.00	ND	6.00	ND	3600.00	ND	5.00	50.00	1.50	1600.00	ND	5.00	ND	ND	ND
BGA-1223-2	0.5-1.0'	ND	6.00	25.00	ND	6.00	ND	2100.00	ND	5.00	270.00	1.50	1400.00	ND	5.00	ND	ND	ND
BGA-1223-3	1.0-2.0'	ND	6.00	25.00	ND	2.50	ND	1600.00	ND	5.00	50.00	1.50	1500.00	ND	5.00	ND	ND	ND
BGA-1223-4	2.0-3.0'	ND	5.00	25.00	ND	2.50	ND	1500.00	ND	5.00	260.00	1.50	1200.00	ND	5.00	ND	ND	ND
BGA-1223-5	3.0-4.0'	ND	5.00	25.00	ND	2.50	ND	1900.00	ND	5.00	50.00	1.50	1400.00	ND	5.00	ND	ND	ND
BGA-1223-6	4.0-5.0'	ND	6.00	25.00	ND	2.50	ND	2000.00	ND	5.00	50.00	1.50	1700.00	ND	5.00	ND	ND	ND
Detection Limit		*10	*3	*50	*0.5	*5	*0.5	*1000	*50	*10	*100	*3	*500	*0.1	*10	*0.5	*3	*5
Average Concentration		0.00	4.40	33.38	0.00	3.98	0.00	2925.00	0.00	6.13	167.08	2.67	1535.83	0.00	5.63	0.00	0.00	0.00
Standard Deviation		0.00	1.38	15.52	0.00	2.24	0.00	1496.83	0.00	4.04	118.93	2.30	498.73	0.00	3.06	0.00	0.00	0.00
Variance		0.00	1.91	240.77	0.00	5.01	0.00	2210652.17	0.00	16.29	14143.30	5.28	248729.71	0.00	9.38	0.00	0.00	0.00
Coefficient of Variation		ERR	31.46	46.49	ERR	56.18	ERR	50.83	ERR	65.89	71.18	86.13	32.47	ERR	54.43	ERR	ERR	ERR
Maximum Value		0.00	6.00	76.00	0.00	9.00	0.00	6200.00	0.00	23.00	420.00	12.00	3300.00	0.00	20.00	0.00	0.00	0.00
Total Number of Samples		24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00

Note:
All No Detection Values (ND) Have Been Given A Value
Equal To 1/2 The Detection Value For Purposes Of Calculation

TABLE 3

EPA METHOD 8270 GC/MS SCAN FOR SEMIVOLATILE
ORGANICS IN FOUR SAMPLES FROM 317 AREA TRENCH, 20' ELEVATION

Sample I.D.	Priority Pollutants	Tentatively Identified Compounds	Identified Compounds
Node 4, 2-20'	ND	ND	ND
Node 7, 2-20'	ND	Benzenedicarboxylic Acid Esters 200 ppb	ND
Node 6, 3-20'	ND	Benzenedicarboxylic Acid Esters 14 ppb	Tetrachloro-ethene 30 ppb Styrene 60 ppb
Node 5, 1-20'	ND	ND	ND

Wenck Associates, Inc.

Consulting Engineers
(612) 475-0858

February 12, 1988

Mr. Alan Sorsher
Department of Health Services
Toxic Substances Control Division
107 S. Broadway, Room 7128
Los Angeles, California 90012

Re: Progress Report No. 11 -
Implementation of Revised RCRA Closure Plan
Week of February 8, 1988

Dear Mr. Sorsher:

Work continued on the closure of the Bermite facility with the trenching at the 317 area. Additional information on the results of the laboratory testing at the nodes with the high OVA readings were forwarded to yourself and Mr. Greg Wood of the South Coast Air Quality Management District on February 9, 1988. On February 10, 1988 Mr. Greg wood approved the proposed land farming of the soils as outlined in our request dated February 4, 1988 which was forwarded to both yourself and Mr. Greg Wood. Since February 10 we have been attempting to reach you at your office to inform you of his approval and our plan to proceed. As soon as his letter of approval is received, a copy will be forwarded to you.

We have proceeed with the land farming in accordance with the approval from the South Coast Air Quality Management District and are presently at a depth of approximately 24 feet.

Data is being accumulated on the metals, on the 8270 results and the other information that you have requested and it will be forwarded to you during the next period.

Please note that two truckloads of soil were shipped to Casmalia on February 9 and two loads were shipped on February 11.

If you have any comments of questions on anything in this report please feel free to contact me.

Respectfully submitted,

WENCK ASSOCIATES, INC.

Norman C. Wenck, P.E.
President

cc: Michael Fernandez, EPA
Elizabeth Lafferty, DHS
Larry Peterson, RWQCB

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

Wenck Associates, Inc.

Consulting Engineers
(612) 475-0858

February 5, 1988

Mr. Alan Sorsher
Department of Health Services
Toxic Substances Control Division
107 S. Broadway, Room 7128
Los Angeles, California 90012

Re: Progress Report No. 10 -
Implementation of Revised RCRA Closure Plan
Week of February 1, 1988

Dear Mr. Sorsher:

Work continued on the referenced project with further widening of the trench at the 317 area. The widening of the trench was completed to the 20 foot depth during this period. Rainfall at the site in the early part of the week prohibited any further trenching activities. Please note that two truckloads of soil were shipped to Casmalia on Monday, February 1, 1988.

If you have any questions on any of the items in this report please feel free to contact me.

Respectfully submitted,

WENCK ASSOCIATES, INC.

Norman C. Wenck, P.E.
President

cc: Michael Fernandez, EPA
Elizabeth Lafferty, DHS
Larry Peterson, RWQCB

832 Twelve Oaks Center
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Wayzata, MN 55391

Wenck Associates, Inc.

Consulting Engineers
(612) 475-0858

January 29, 1988

Mr. Alan Sorsher
Department of Health Services
Toxic Substances Control Division
107 S. Broadway, Room 7128
Los Angeles, California 90012

Re: Progress Report No. 9 - Implementation of Revised RCRA Closure Plan, Week of January 25, 1988

Dear Mr. Sorsher:

Work continued on the referenced project with further trenching at the 317 area and aquifer testing in the monitoring wells.

As we received no objections to further trenching from Michael Fernandez of EPA, we have continued the trenching activities at the 317 former surface impoundment. Work commenced on widening the trench approximately 15 feet to the north. The plan view and section view drawings of the 317 trenching activities that you have requested are enclosed. We anticipate sending you these drawings during the next work period. Please note that two truckloads of soil were shipped to Casmalia on January 27 and six truckloads were shipped to Casmalia on January 29, 1988.

A pumping test was completed on well W1 during the last period and a pumping test was completed on well W2 during this work period. As indicated in Progress Report no. 8, we anticipate providing you with a report detailing the well construction, development and aquifer test results as soon as all of this data is available.

The laboratory results have been received pertaining to the organic analysis at the three burn areas: burn cage pans and rails area, east fork area, and burn area. None of the five organic compounds tested for were present in the 20 percent samples analyzed for each of the three burn areas. Therefore, the additional 80 percent samples from each of the three burn areas will not be analyzed. We continue to receive and compile the analysis results from the rest of the soil sampling at the RCRA units. We anticipate providing you with a detailed report on these results when we have received all of the data.

If you have any questions on any of the items in this report please feel free to contact me.

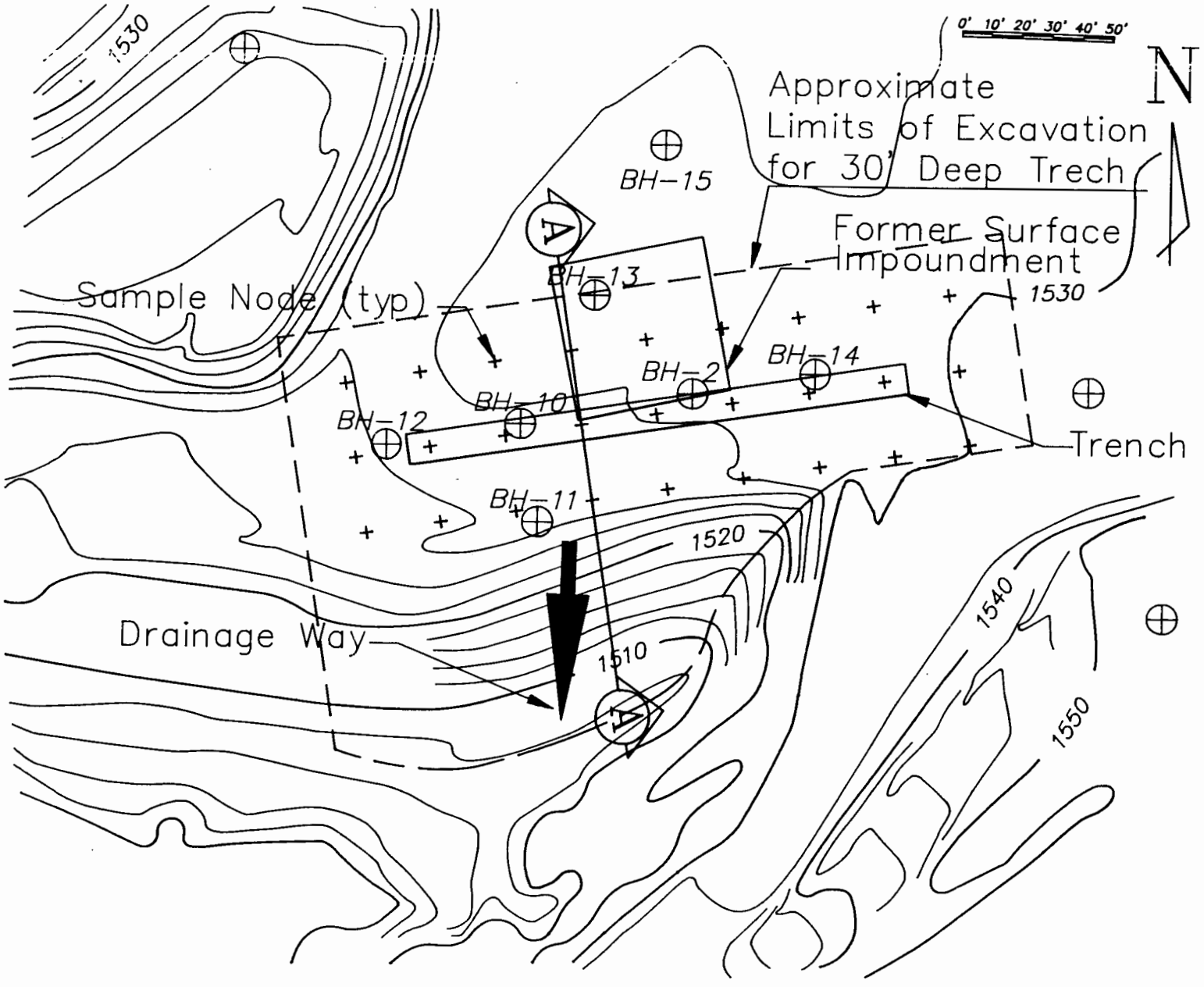
Respectfully submitted,

WENCK ASSOCIATES, INC.

Norman C. Wenck, P.E.
President

cc: Michael Fernandez, EPA
Elizabeth Lafferty, DHS
Larry Peterson, RWQCB

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391



BERMITE DIVISION - WHITTAKER CORPORATION

317 Area Soil Removal - Limits of Excavation

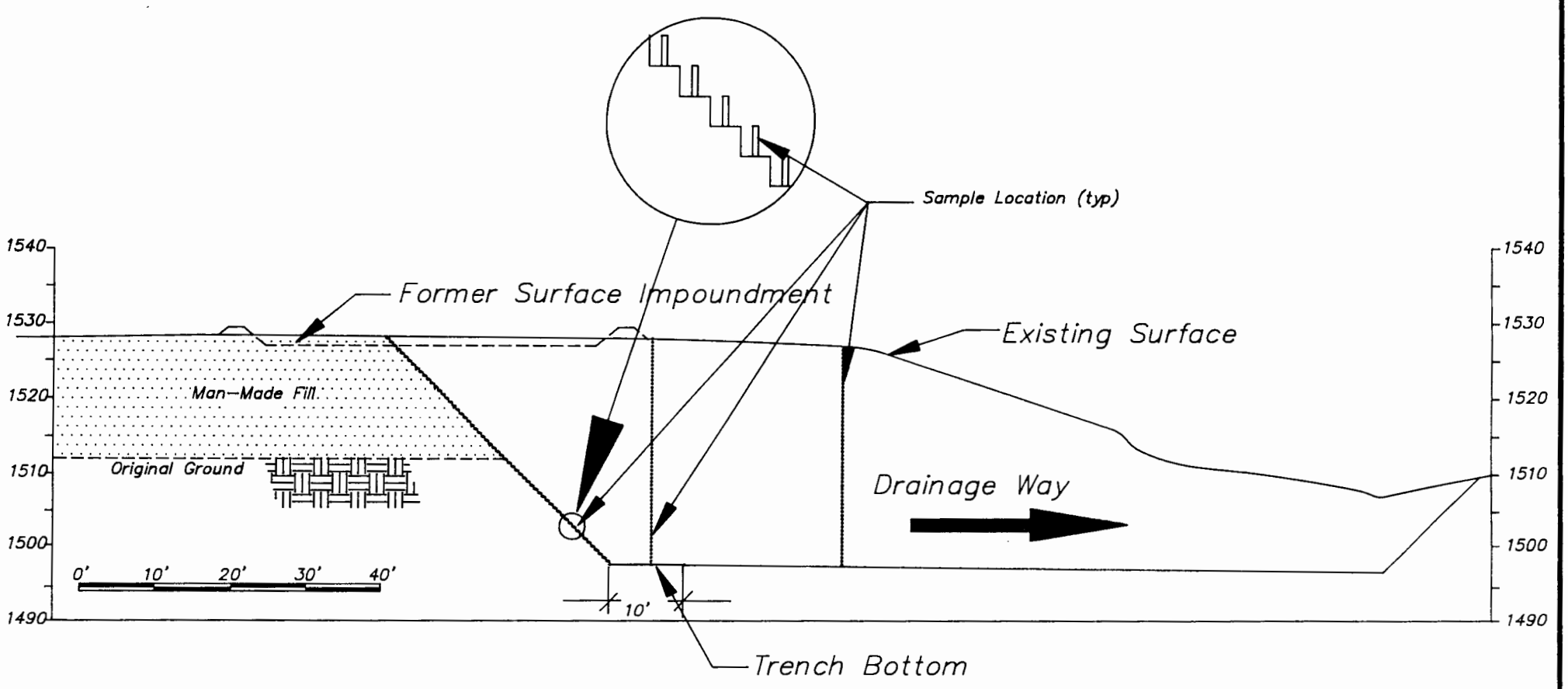
Wenck Associates, Inc.

Consulting Engineers

Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

JAN 88

Fig. 1



BERMITE DIVISION - WHITTAKER CORPORATION

317 Area Soil Removal - Limits of Excavation

Consulting Engineers

Wenck Associates, Inc.
Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

JAN 88

Fig 1A

Wenck Associates, Inc.

Consulting Engineers
(612) 475-0858

January 22, 1988

Mr. Alan Sorsher
Department of Health Services
Toxic Substances Control Division
107 S. Broadway, Room 7128
Los Angeles, California 90012

Re: Progress Report No. 8 - Implementation of Revised RCRA Closure Plan, Weeks of January 11 and January 18, 1988

Dear Mr. Sorsher:

Work continued on the referenced project with further trenching at the 317 area and construction of monitoring well W-3.

Work at the 317 trench proceeded to a depth of approximately 18.5 feet on January 15 and proceeded to approximately 20.0 feet by January 22. It should be noted that four loads of soil were shipped to Casmalia during the week of January 11 and three loads of soil were shipped to Casmalia during the week of January 18, 1988. Rainy weather was encountered during the latter part of the week of January 11 and the area was covered during these periods.

With your approval this week, work has continued on the 317 trench to continue the trenching activities from the 20 foot elevation to the 30 foot elevation. Soil samples have been taken at the 21 nodes at the 20 foot elevation. Four of these samples have been sent to the laboratory for analysis by EPA Method 8270. To reach the 30 foot elevation, we anticipate widening the trench by one-half node, or approximately 15 feet. We anticipate this work will be done by the end of the next period. We anticipate being at the 30 foot elevation in three weeks. Per your request, we will be sending you revised drawings showing the plan view and a section view of the 317 trenching activities.

Monitoring well W-3 was completed during this period. A pumping test will be attempted on monitoring well W-1 during this week. When we have completed characterizing the aquifer parameters, we anticipate providing you with a report detailing the well construction, development and aquifer test results.

If you have any questions on any of the items in this report please feel free to contact me.

Respectfully submitted,

WENCK ASSOCIATES, INC.

Norman C. Wenck, P.E.
President

cc: Michael Fernandez, EPA
Elizabeth Lafferty, DHS
Larry Peterson, RWQCB

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

Wenck Associates, Inc.

Consulting Engineers
(612) 475-0858

January 11, 1988

Mr. Alan Sorsher
Department of Health Services
Toxic Substances Control Division
107 S. Broadway, Room 7128
Los Angeles, California 90012

Re: Progress Report No. 7 - Implementation of Revised RCRA Closure Plan, Weeks of December 28, 1987 and January 4, 1988

Dear Mr. Sorsher:

Work continued on the referenced project beginning on January 4, 1988 with the trenching at the 317 area and the construction of monitoring well W-3.

Work at the 317 trench proceeded to a depth of approximately 14' during the period. It should be noted that four loads of soil were shipped to Casmalia on January 8 and four loads are scheduled to be shipped on January 11, 1988. Rainy weather was encountered during the early part of the week and the area was covered during these periods.

The location for monitoring well W-3 was selected in consultation with you and is located to the south of a line connecting wells W-1 and W-2. Water was encountered during the drilling on January 9 at an approximate depth of 700 feet below the surface. This site was inspected by both you and Elizabeth Lafferty of DHS.

Collection of the remaining soil samples from the Burn Area was performed on January 5 and samples from the 16' level at the 317 Area were taken on January 6. Split samples were taken and were provided to you for metal analysis from the Burn Area.

The modifications to the Closure Plan submitted by your letter dated December 28, 1987 were received on January 4, 1988 and are currently being reviewed.

Activities at the site planned for next period include the completion of the well at location W-3, continuation of the trenching at 317 receipt and review of laboratory results of the soil samples. It is anticipated that the 16' depth will be reached at the 317 Area and that separate storage areas for the excavated material will be started. In addition, it is anticipated that your approval of the plunger-type pumping system can be given so that the pumps can be installed within the next few days.

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

Wenck Associates, Inc.

Consulting Engineers
(612) 475-0858

If you have any questions on any of the items in this report please feel free to contact me.

Respectfully submitted,

WENCK ASSOCIATES, INC.

Norman C. Wenck, P.E.
President

NCW/cmk

cc: Michael Fernandez, EPA
Elizabeth Lafferty, DHS
Larry Peterson, RWQCB

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF HEALTH SERVICES
107 SOUTH BROADWAY, ROOM 7011
LOS ANGELES, CA 90012
(213) 620-2380

December 28, 1987

Mr. Gordon Louttit
Vice President
Whittaker Corporation
10880 Wilshire Boulevard
Los Angeles, California 90024

Dear Mr. Louttit:

WHITTAKER CORPORATION, BERMITE DIVISION, SAUGUS, CA CAD064573108, FACILITY CLOSURE PLAN MODIFICATIONS

As a result of the meetings held on October 5, 6, 7, and November 12, 1987 between yourself, your consultants, staff of the California Department of Health Services (DHS), the Region IX office of the U.S. Environmental Protection Agency (EPA) and the State Water Quality Control Board, Los Angeles Region, (RWQCB, on October 6, and November 12), we have tentatively revised the previously approved closure plan for the above-referenced facility.

Based upon the meetings held during early October, modifications developed by DHS and EPA were given to your consultant on October 27. Minor corrections and revisions to these modifications were discussed during the November 12 meeting. The results of that meeting are reflected in the enclosed versions of the modifications:

1. 317 Surface Impoundment, Rev. 4.1, including Work Plan for Soils Investigation and Removal, Rev. 1.1.

2. 342 Surface Impoundment, Rev 3.1.

3. Burn Areas, General Considerations, Rev. 2.0.

4. Burn Cage, Pans and Rails Area, Rev. 2.0.

5. Burn Pit Areas, Rev 1.

6. East Fork Detonation Range, Rev. 1.1.

7. Lead Azide Neutralizing Tanks, Bldg. 207, Rev. 1.

8. Dry Storage Units, 2 Buildings, 3 Wooden and 3 Steel Portable Magazines, Rev. 1.

Concurrence
12-31-87
Robinson 12/31

12-31-87
Bernstein

9. QA/QC Plan, Revised 9/1/87.

10. Health and Safety Plan, Rev. 1.0.

In addition, we are enclosing versions of the schedules of closure activities reflecting the above revisions to the closure plan.

You should be aware that it will be necessary to "notice" this package of revisions for public comment before final approval. This necessary step should not, however, delay the implementation of those portions of the plan, such as the VOC removal at the former 317 surface impoundment and the groundwater study that are not being revised and which simply reflect decisions made pursuant to the approved closure plan of September 30. For example, the pilot VOC removal method for the 317 surface impoundment contained in the revised package constitutes an approved alternative VOC removal method under paragraph II.A.2 of the approved closure plan. The Work Plan listed above is approved for the pilot trenching.

It is our intention to public notice these revisions to the closure plan during the week of January 11, 1988. Therefore, you should notify us by January 11, 1988 if you feel there are any errors or discrepancies in the enclosures.

Should you have questions, please contact Alan Sorsher of the Southern California Section DHS at the above telephone number.

Sincerely,

Angelo Bellomo, Chief
Southern California Section
Toxic Substances Control Division
Department of Health Services

12-28-87
Date

Jeff Zelikson, Director
Toxics & Waste Management Division
U.S. EPA, Region IX

Date

Enclosure

cc: (see next page)

cc: (w/enclosure)

Norman Wenck
Wenck Associates,
832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

cc: (w/o enclosure)

Anastacio Medina, LA County Haz. Waste Program
2615 S. Grand Ave., 6th Floor
Los Angeles, CA 90007

Larry Peterson, RWQCB, Los Angeles
107 South Broadway, Room 4027
Los Angeles, CA 90012

Caroline Cabias, DHS, HWMS-TSCD, Sacramento
Financial Responsibility Unit - DHS, Sacramento

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

October 26, 1987

James R. Moore, Esq.
Perkins Coie
1900 Washington Building
Seattle, Washington 98101

Re: Whittaker Corporation, Bermite Division,
RCRA Closure Plan

Dear Mr. Moore:

This letter is written in response to your letter of October 9, 1987, in which you requested that the Environmental Protection Agency ("EPA") toll the statute of limitations applicable to Whittaker Corporation's right to seek review for the above referenced closure plan while Whittaker seeks resolution of several matters in the plan.

Inasmuch as the discussions currently underway appear to be proceeding in a satisfactory fashion, and there is no interest on EPA's part in compelling Whittaker to seek premature review of issues which may be resolved by these discussions, EPA agrees that it shall not assert any statute of limitations or laches claim or defense to bar or restrict Whittaker's right to seek review of the closure plan provided Whittaker seeks review of the closure plan by November 29, 1987. This deadline assures Whittaker that it will have the benefit of the full 30 day period following approval of the closure plan in which to seek resolution of the matters at issue without restricting Whittaker's ability to seek review of the plan should it decide to do so.

I trust that this action will prove to be satisfactory. If you have any questions about this matter, please call me at (415) 974-8636.

Very truly yours,

Michael B. Hingerty

Michael B. Hingerty

cc: Michael Fernandez

Wenck Associates, Inc.
Consulting Engineers
(612) 475-0858

December 18, 1987

Mr. Alan Sorsher
Department of Health Services
Toxic Substances Control Division
107 S. Broadway, Room 7128
Los Angeles, California 90012

Re: Progress Report No. 5 - Implementation of Revised RCRA Closure Plan, Week of December 14, 1987

Dear Mr. Sorsher:

Work continued during the period with the trenching at the 317 area and the construction of monitoring well W-1 near the 317 area essentially completed. The well W-1 was developed on December 17 and 18 and appears to be of substantially less capacity than well W-2. The water level in this well appears to be approximately the same elevation as that in well W-2 and work will be performed during the next period to determine the exact static water levels of these two wells.

Work at the 317 trenching proceeded to a depth of approximately 11 feet during the period. Due to rainy weather, no work was performed on December 16, 17 or 18. It should be noted that three loads of contaminated soil were shipped on December 14 and four loads were shipped on December 15.

Additional soil samples were collected from the East Fork Area and the Burn Cage and Burn Pan and Rails Area.

Work expected for next period includes the continuation of the trenching at the 317 area, the determination of the water levels at the two completed wells together with the location of the third monitoring well and the analytical work for the soil samples that are presently in the laboratory.

Thank you for your continued interest in this project. It appears that the activities at the site will be somewhat reduced until after the holidays. It is expected that the third monitoring well construction will begin again on approximately January 4.

Respectfully submitted,

WENCK ASSOCIATES, INC.

Norman C. Wenck, P.E.
President

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

State of California

Department of Health Services

Memorandum

M. Fernandez

To : John Harris
Environmental Assessment
Technical Services Unit, PP&E
Toxic Substances Control Division

Date : December 8, 1987

Subject: Your 10/26 memo on Whittaker-Bermite

From : Facility Permitting Unit
Southern California Section
Toxic Substances Control Division

Per your recent request, I am responding to your memo of October 26, 1987 on the Whittaker-Bermite Closure. As you know, I have been working with Jim Frampton on most of the soil sampling plans, and Liz Lafferty of the Southern California Section has been assisting me with the groundwater aspects. I will try to address your comments and recommendations in the order of your memo.

Groundwater Monitoring

1. Well Construction - Liz and I were aware of the problems concerning materials of construction as proposed by the consultant. We have since discussed the construction with Steve Reynolds and Elgar Stephens. Whittaker has been looking into low alloy steels as an alternative to stainless. However, due to time constraints, they have used all stainless for the first well. They will use an all stainless/teflon turbine pump for purging the well and a stainless/teflon bladder pump for sampling.

2. Groundwater Sampling and Analysis Plan - Whittaker must still provide a stand-alone sampling and analysis plan which must cover the appropriate parameters and methods. We will review this plan against the regulations and guidance documents when it is submitted.

317 Soils Investigation and Removal Plan, 10/9/87

We have subsequently revised Whittaker's proposed plan based on telephone discussions with you and meetings with them.

1. The laboratory results from the sampling done in July was actually in units of micrograms per kilogram of soil, whereas the field screening and borehole gas sample were reported as ppm, on a volume/volume basis. I believe that if you convert to the same basis, the concentrations work out to be in the same order of magnitude. As we discussed, I have calculated three different estimates of the total quantity of VOC in the proposed excavation and in each case it came out to 0.1 or 0.2 pounds, unless they hit an extremely concentrated pocket.

2. During our meeting with them of October 7, we agreed to allow them to try the trenching approach on a pilot basis, with the proviso that they perform field testing for volatile organics in the soils prior to excavation. This will give them an opportunity to demonstrate their contention that they can characterize the site in this manner.

3 & 4. For metals sampling and analysis, the elevations of interest were worked out in consultation with Jim Frampton. The Air Quality Management District considers the expected VOC emissions from this excavation to be exempt.

5 & 6. Instead of the headspace technique Whittaker is using a punchbar to sample soil vapor a foot (two 6-inch lifts) below the surface. This technique is mentioned in the 10/86 RFI guidance manual from EPA.

They are taking 5% duplicate readings in the field and minimum 5% core samples for laboratory analysis and correlation of highest and lowest reading spots from each lift. Samples are taken between and beyond the grid nodes as needed to define the areas of contamination.

7. The top 16 feet or so under the former impoundment area consists of dirt fill material placed after the units were removed. Since they are therefore artificially disturbed, we felt the area would not represent a geologically similar background area to be compared with several study areas on the site.

8. Whittaker has agreed to limit the pilot trench to 20 feet in depth unless they obtain permission from the agencies to go to 30 feet. In addition, we have modified their trenching plan so they can only extend the trench horizontally if a "hot spot" over 500 ppm is uncovered.

Recommendations

1. As you recall, we have previously agreed to a 165 foot trench. A 50 foot trench may not provide enough information to allow us to evaluate the workability of the process.

2. As discussed above, Whittaker will sample between and beyond the grid nodes as necessary.

3. These items are discussed above.

4. Whittaker understands and has agreed to install vapor probes. The plan calls for the details to be provided within 5 days of completion of the pilot excavation.

5. They are protecting the excavation and soil piles from rainfall and run-on using plastic tarps, berms and diversion ditches.

6. Mr. He, the engineer on site for Wenck & Associates appears to be well organized, careful and not to be likely to "shoot from the hip." Between the field sampling and analysis, marking the surface for removal and the earthmoving, they are doing only one or two lifts per day. I understand that they have a computer and plotter now on-site and will be able to graphically display the data as it is generated.

I believe they are realizing that this is not a quick 1,2,3-type of operation. You were not involved with it at the time, but this entire project is in much better shape technically than it was a year ago.

Finally, we appreciate the assistance furnished by you and the other individuals of the Environmental Assessment Unit. After receiving the help from you, I felt that I was able to carry the project forward and that it was not necessary to take up any more of your time unless another question arose. In the future if you desire, I will try to keep you better informed as to how things develop.

Once again thank you for your assistance on this project.

Alan Sorsher

Alan Sorsher
Associate Waste Management Engineer

AS:as

cc: Micheal Fernandez
Jim Frampton

Wenck Associates, Inc.

Consulting Engineers
(612) 475-0858

December 7, 1987

Mr. Alan Sorsher
Department of Health Services
Toxic Substances Control Division
107 S. Broadway, Room 7128
Los Angeles, California 90012

Re: Progress Report No. 3 - Implementation of Revised RCRA Closure Plan, Week of November 30, 1987

Dear Mr. Sorsher:

Work continued on the construction of the monitoring well near the 342 area and the trenching at the 317 area during this period.

The construction of the well was completed on December 5. A stainless steel casing, together with the 20 feet of stainless steel screen was installed on December 2. The gravel pack and the betonite seal were also installed on December 2. The annular space was grouted on December 3 and the well was developed on December 5.

Work on the 317 trenching proceeded to a depth of approximately 5 feet below the surface. Rainy weather prevented work from proceeding on December 4 and 5. During this period both the excavated area and the excavated soils were covered with plastic in addition to the runon prevention measures that are in place. QA/QC samples have been taken and were delivered to the laboratory on December 3.

Preliminary analytical results were received on the soil samples with the final results to be available during the next period.

Work scheduled for next period includes the initiation of the construction of the monitoring well near 317, continuation of the trenching at 317 as weather permits, and soil sampling for approximately 50 additional samples that will be analyzed for the appropriate parameters as defined in the analytical results that are expected during the week of December 7, 1987.

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Wayzata, MN 55391

Wenck Associates, Inc.

Consulting Engineers
(612) 475-0858

Again we appreciate your interest in this project and the time that you spend with your oversite activities and your visits to the work area. If you have any questions on this matter please feel free to contact us.

Respectfully submitted,

WENCK ASSOCIATES, INC.

Norman C. Wenck, P.E.
President

NCW/msw

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

Wenck Associates, Inc.

November 27, 1987

Consulting Engineers
(612) 475-0858

Mr. Alan Sorsher
Department of Health Services
Toxic Substances Control Division
107 S. Broadway, Room 7128
Los Angeles, California 90012

Re: Progress Report No. 2 - Implementation of Revised RCRA Closure Plan, Week of November 23, 1987

Dear Mr. Sorsher:

Work continued on the construction of the monitoring well near the 342 area. Water was encountered at an elevation of approximately 455', just below the bedrock that was encountered at approximately 420'. Certain decisions were made with consultation with Liz Lafferty regarding the construction of this well. Essentially 20' of stainless steel screen will be used, together with stainless steel casing. The details of the exact placement of the screen will be depicted in a drawing which will be submitted at a later date.

The 317 trenching was initiated during the period as you observed during your site visit on November 25, 1987. We are in receipt of your variance for this portion of the project which was submitted by your letter dated November 16, 1987 to Mr. Gordon Louttit.

Work will continue both in the construction of the well at the 342 area, and the well near the 317 area. Work will also continue with the trenching at the 317 area. As soon as the results are available from the samples collected during the last period, additional soil samples will be taken. You will be advised as to the exact date of that soil sampling.

We appreciate your assistance and your site visit during this period, and thank you for your help in implementing this project.

Respectfully submitted,

WENCK ASSOCIATES, INC.

Norman C. Wenck, P.E.
President

NCW/msw

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

Wenck Associates, Inc.

Consulting Engineers
(612) 475-0858

November 20, 1987

Mr. Alan Sorsher
Department of Health Services
Toxic Substances Control Division
107 S. Broadway, Room 7128
Los Angeles, California 90012

Re: Progress Report No. 1 - Implementation of the Revised RCRA Closure Plan

Dear Mr. Sorsher:

We would like to extend our appreciation to you and Michael Fernandez for the timely review of our sampling plan and the assistance that you have provided to us in being able to proceed with the work required to facilitate closure of the RCRA facilities at the Bermite facility. We intend to keep you informed on a weekly basis of the progress of this work.

As we discussed during the past two weeks, we have initiated the drilling of the first of the groundwater monitoring wells. This well is located near the 342 area.

The construction method used initially, as requested, was the air rotary method. We were able to proceed to a depth of 420', at which time the hole caved in and the rotary mud method was then utilized. Rock, either bedrock or a boulder, was encountered shortly thereafter, and at the present time the depth of the hole is approximately 450'. An attempt will be made to develop water at this level, however if this is not possible we will be in contact with you for consultation on the course of action.

The preliminary soil sampling was accomplished during the 19th and 20th of November, with the surface samples of 317 collected together with the background samples, and the samples are to be analyzed for the Appendix VIII constituents.

We also want to thank you for the assistance given us in developing, defining and approving the 317 trenching plan and want to confirm our schedule to initiate that program on November 23, 1987.

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

Wenck Associates, Inc.

Consulting Engineers
(612) 475-0858

If you have any questions on the work that has taken place or our plans, please feel free to contact me. Again, we want to thank you for your cooperation and assistance in implementing this program.

Respectfully submitted,

WENCK ASSOCIATES, INC.

Norman C. Wenck, P.E.
President

cc: Michael Fernandez, EPA

832 Twelve Oaks Center
15500 Wayzata Blvd.
Wayzata, MN 55391

Whittaker

Whittaker Corporation
10880 Wilshire Boulevard
Los Angeles, CA 90024-9990
213/475-9411

Gordon J. Louttit
Vice President
Assistant General Counsel

November 4, 1987

Mr. Michael Fernandez
Environmental Protection Agency
Region IX
215 Fremont Street
San Francisco, CA 94105

Re: Report of Equipment Removal Procedures and Closure Expense Estimate as Requested in Facility Closure Plan Approval Dated September 30, 1987

Dear Mike:

In accordance with the transmittal letter of the Facility Closure Plan Approval dated September 30, 1987, the attached report is submitted in response to the request shown on page 3 entitled "Compliance Schedule".

We are available to discuss this information in more detail with you. If you have any questions on this matter please feel free to contact me.

Sincerely,

WHITTAKER CORPORATION

Gordon J. Louttit

GJL:jr

Enclosure

V116:GJL1

STATE OF CALIFORNIA--HEALTH AND WELFARE AGENCY GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF HEALTH SERVICES
107 SOUTH BROADWAY, ROOM ~~B-48~~ 7011
LOS ANGELES, CA 90012
(213) 620-2380

February 4, 1987

Ms. Lily Wong
Toxics and Waste Management Division
U.S. Environmental Protection Agency
Region IX
215 Fremont Street
San Francisco, CA 94105

Dear Ms. Wong:

SOIL SAMPLING AND ANALYSIS FOR WHITTAKER-BERMITE'S "317 SURFACE IMPOUNDMENT"

We have reviewed the soil characterization report and additional information regarding the sampling program in the vicinity of the former surface impoundment near building 317 at Whittaker-Bermite's Saugus facility. We find the previously submitted sampling plan and the analytical results generated from this program to be totally inadequate.

Per Mr. Phil Bobel's December 16, 1986 letter to Dave Willis, in order for Whittaker to close "clean," they would have to remove all contaminated subsoils down to non-detectable or established background levels for all Appendix VIII constituents of concern and demonstrate that the ground water beneath the unit has not been contaminated with any of these constituents. Based upon the superficial results submitted, it would appear that hazardous constituents are present in the samples taken from the impoundment area which are not present in the single background sample.

It would be in the facility's interest to prepare a scientifically credible sampling plan in accordance with Chapter 1 of SW-846 and section 3.5.2 of the California Site Mitigation Decision Tree, "Development of an Integrated Site-Specific Quality Assurance/Quality Control Plan for Sampling and Analysis." Such a sampling plan should statistically compare sample groups from the background and impoundment areas and confirm with a 95% probability that there is no significant difference between the two sample groups.

We have been informed by Whittaker's consultant that the tanks and concrete pad which replaced the impoundment have already been removed. Therefore the soil beneath the pad is now more accessible for sampling. However, the removal of the tanks and pad was done without an approved closure plan.

Attached is a list of specific comments and questions relating to the impoundment area sampling.

If you have any questions, please contact Alan Sorsher at the above telephone number.

Sincerely,

John A. Hinton, P.E., Chief
Facility Permitting Unit
Southern California Section
Toxic Substances Control Division

JAH:AS:as

cc: Athar Kahn, RWQCB
Ray Seid, EPA
Al Storm, DHS, HQ
Hossein Nasseri, DHS, LA
Tony Catanese, DHS, LA

enclosure

REVIEW COMMENTS

CONFIRMATION SOIL SAMPLING
WHITTAKER-BERMITE "317 SURFACE IMPOUNDMENT"

1. In order to evaluate soil sampling for the purpose of determining "clean" closure, the actual closure plan that was implemented should be supplied. In addition, the history of the unit should be described including:

   a. the date the unit was installed
   b. the original materials of construction and as-built drawings
   c. any record or recollection of repairs and releases
   d. any record or recollection of the original PVC liner, its repairs or replacement

2. The topographical map submitted does not clearly show details of the local topography.

3. The report claims that large boulders and cobbles made drilling very difficult and a backhoe had to be used for digging. No drilling or trench log was furnished to support this statement. All drilling or trenching should be logged under the direction of a registered geologist. The local stratigraphy of the site should be furnished so that the migration potential of any leakage can be considered. Other more recent sampling on the Whittaker site has been done with a hollow stem auger which would allow for deeper sampling.

4. The Consent Agreement mentions a <u>minimum</u> number of samples. A sufficient number of samples, including background should be taken to prove that the background population is not significantly different than the population in the impoundment area.

5. No details were given as to how the samples were obtained. Samples which will be analyzed for volatile compounds must be taken in a manner which will minimize the loss of such compounds. No mention of a split-spoon sampler or other such device can be found.

6. The lab reports give the dates the lab received the samples and the dates of analysis. Since the dates of the actual sampling are omitted, we cannot confirm that the samples were analyzed quickly enough to be accurate.

7. The lab report states that some of the samples analyzed for metals were delivered in paper cartons. This is an improper container for the storage and preservation of samples. In addition, the lab report states that method 1310 was used to extract the samples for metal analysis. All samples should be digested and analyzed for <u>total concentration</u>, not <u>soluble concentration</u>, since we are

trying to detect contamination, not determine how much might be soluble.

No explanation is given for the delay in providing the sample from pit 3. (Also a sample of "floor dirt" was analyzed but not reported. This may help us in evaluating the closure plan for the other units).

8. The consultant's "California Clean-up Standards to Protect Groundwater" listed in the Table 1 of the report are incorrect, meaningless and inapplicable. Per Phil Bobel's letter of 12/16/86, they must clean up to background if they wish to close clean.

9. The letter from Mr. Bohanan of Whittaker-Bermite to Harry Sneh dated November 20, 1985 describes the surface impoundment removal activities in March 1983. He mentions digging with a backhoe 10 -11 feet "down to the first moist soil." However, the October 6, 1986 letter to EPA from Mr. Wenck states there is no known groundwater in this portion of the facility. Was the moisture noted in 1983 from groundwater or leakage from the impoundment?